

COUNTWAY LIBRARY



HC 315F R

BOSTON  
MEDICAL LIBRARY



IN THE  
Francis A. Countway  
Library of Medicine  
BOSTON



573 V. 10 PP. 258-2-3



Digitized by the Internet Archive  
in 2015











DOCTOR, YOUR MEMBERSHIP EXPIRED DECEMBER 31, 1916. SEE YOUR SECRETARY.

# THE JOURNAL



## Oklahoma State Medical Association

VOL. X. No. 1.

JANUARY, 1917

ANNUAL SUBSCRIPTION, \$2.00

Published Monthly at Muskogee, Oklahoma, under direction of the Council.

### NEW ORLEANS POLYCLINIC

Graduate School of Medicine, Tulane University of Louisiana

Thirtieth Annual Session Opens September 25, 1916, and Closes June 9, 1917.

Physicians will find the Polyclinic an excellent means for posting themselves upon modern progress in all branches of medicine and surgery. The specialties are fully taught, including laboratory and cadaveric work. For further information address—

CHAS. CHASSAIGNAC, M. D., Dean,  
New Orleans Polyclinic, New Orleans.

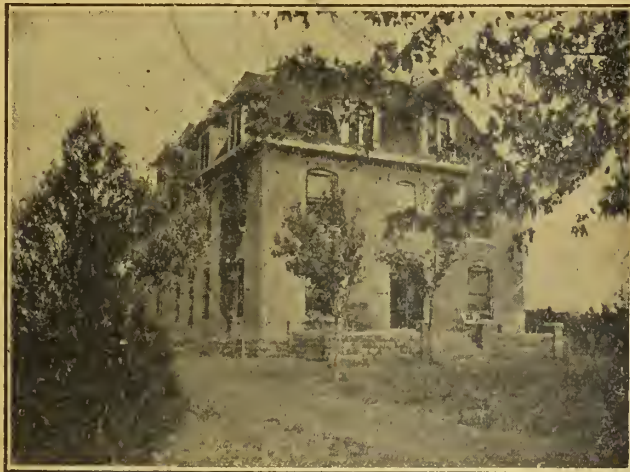
Post Office Box 770

Tulane also offers highest class education leading to degrees in Medicine, Pharmacy, Dentistry, Hygiene and Tropical Medicine.

## The Duke Sanitarium

Conducted  
by  
Dr. Jno. W. Duke

Formerly Clinical Assistant to the Chair of Mental Diseases, Medical Dept. University of New York. Formerly Assistant Physician, Manhattan State Hospital for the Insane, Ward's Island, New York. Formerly Assistant Physician, Connecticut State Hospital for the Insane, Middletown, Conn.



For the treatment of Nervous and Mental Diseases, Drug and Alcohol Addictions. Special attention given Baths, Dietetics, Massage and Rest Cure. A strictly Ethical Institution. We invite the investigation of every reputable physician. For rates and further particulars address

DR. JOHN W. DUKE, GUTHRIE, OKLAHOMA

# The Handy Ampoule

Our Sterilized Solutions for Hypodermatic Injection Have  
Solved a Difficult Problem.

---

FORMERLY when a physician wished to resort to hypodermatic medication he had to use tinctures, fluid extracts or solutions of his own making. Often his solutions were found to contain precipitates. Frequently sterile water was not to be had when wanted. Result: delay and disappointment—sometimes even risk of life.

Parke, Davis & Co.'s Sterilized Solutions in Ampoules have cleared away the difficulties.

## ADVANTAGES.

1. Solutions in ampoules are always ready for use.
2. They are sterile.
3. The dose is accurate, a definite amount of medicament being contained in each milliliter (Cc.) of solution.
4. The drug is treated with the most suitable solvent—distilled water, physiologic salt solution, or oil, as the case may be.
5. The container is hermetically sealed, preventing bacterial contamination.
6. An impervious cardboard carton protects the solution against the actinic effect of light.

♦ ♦ ♦

We supply upward of sixty ready-to-use sterilized solutions. They are described in our catalogue, under "Ampoules," pages 194-200. Consult this valuable list.

## OUR "AMPOULES" BROCHURE

gives therapeutic suggestions, descriptions of packages, prices, etc. Every physician should have this book. We send it, postpaid, on receipt of request.

Home Offices and Laboratories,  
Detroit, Michigan.

**Parke, Davis & Co.**

50 Years of Pharmaceutical Progress





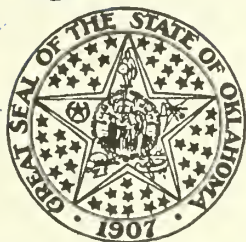




OCT 31 1917  
LIBRARY

# THE JOURNAL

of the



## Oklahoma State Medical Association

VOLUME X

MUSKOGEE, OKLA., JANUARY, 1917

NUMBER 1

### INTESTINAL STASIS.

V. C. TISDAL, M. D., Elk City, Oklahoma

The work of W. A. Lane of London has opened a distinctly new line on investigation with regard to a large class of maladies associated with impaired function of some part of the alimentary canal and of organs closely related thereto. General auto-intoxication, chronic constipation, visceroptosis, floating kidney, gall-stones, duodenal ulcer, mucous colitis, pericolitis, chronic appendicitis and other conditions traceable to perverted functions of these parts of the organism, must now be studied from a different point of view from that which has been brought to bear in the past. Lane has pressed forward in the effort to discover first causes and in doing so has demonstrated clearly that in health maintenance a question of prime importance is body drainage. The non-absorption of poisons and the elimination of whatever poisonous matter may be produced within the alimentary canal before there has been inaugurated a vicious cycle of events which may be the forerunner of disastrous end results. Attention has thus been focused more directly upon previously obscure phenomena of intestinal stasis, and a plausible explanation has been offered of the causes underlying the evolution of these phenomena.

Lane has demonstrated to his own satisfaction and to that of a large number of surgeons in Europe and America that intestinal stasis, as he calls the slowing of the drainage current, is the result of the abnormal fixation of certain portions of the canal with the dropping of the tube on either side of a fixed point, thus producing a kink. The kinking of the intestine prevents the free passage of its contents, causing a puddling in the dependent portions, a damming back and infection of the material and a general slowing of the drainage. His definition of this state of affairs, this chronic intestinal stasis, is such an abnormal delay in the passage of the intestinal contents through a portion or portions of the gastro-intestinal tract as results in the absorption of a greater quantity of toxin or poisonous material than can be treated effectually by the organs whose functions it is to convert them into products as innocuous as possible to the tissue of the body. This re-absorption and auto-intoxication leads to a general lowering of the resistance of the body and to the concomitant increase in susceptibility to various diseases. This increased susceptibility, in his opinion, finds an expression in various conditions to which he has applied the term "end results". His view, it will be noted, is thus the direct antithesis of that of many other observers who consider such diseases as causative factors in the production of intestinal stasis. The end results are cancer of the stomach, intestines, biliary ducts or pancreas, visceral tuberculosis, rheumatoid arthritis, etc.

The explanation offered by Lane for the condition which leads to the chronic intestinal stasis is purely an evolutionary one, as opposed to the hereditary con-

genital and toxic theories held by others, who have made a study of intestinal obstruction in general. According to Lane, the toxic symptoms are secondary. Others hold them to be causative or primary of mechanical changes which produce stasis.

The ptosis of the abdominal viscera, broadly speaking, is the result of the assumption by man of the upright position. In early life ptosis is the result of an abdominal distention of the intestines due to too frequent feeding or upon the continued use of unsuitable diet. In later years it is brought about by the erect posture which the man assumes during waking hours. The resulting pressure and strain may produce distinct changes which may take the form of evolutionary bands. The bands are practically without blood supply and are not to be confounded with inflammatory adhesions which are abundantly supplied with blood as a rule. These evolutionary bands exist primarily for the advantage of the individual, the purpose being to support the intestines and prevent them from dropping downward. They do not develop with equal strength throughout, unfortunately, and as a consequence the bowel is held up firmly in some points and allowed to sag in others. The results being the angulation, or kink, at the point of support.

The points of predilection for the formation of these evolutionary bands, as demonstrated by Lane and his followers, are: (1) the pylorus, (2) duodeno-jejunal junction, (3) different points along the terminal coil of the ileum, (4) the appendix, (5) the hepatic flexure, (6) the splenic flexure, (7) sigmoid flexure, (8) the rectum.

The symptoms produced by this condition vary in different individuals with a degree of obstruction with the concomitant end manifestations. They may be briefly summed up as follows: (1) headache, severe and frequent; (2) nausea, followed by retching and vomiting; (3) anorexia almost constantly present; (4) loss of weight; (5) cold extremities; (6) mental apathy; (7) constipation; (8) foul taste in mouth often accompanied by foul breath, decayed teeth and furred tongue; (9) abdominal distention relieved by eructation, the passing of flatus, or an action of the bowels; (10) abdominal tenderness over the areas of fixation; (11) skin staining; (12) breast changes, assimilating chronic mastitis in the early stages and cystic degeneration in the later stages; (13) general muscular pain and more or less marked stiffness of joints.

The diagnosis of intestinal stasis is made by clinical symptoms plus careful radiographic study, the degree of obstruction and the location of the obstructing kink being determined by the rapidity of the passage through the intestines of bismuth.

The treatment depends upon the degree of stasis. In atonic or asthenic individuals, where there is a general loss of muscular tone and nervous energy with only slight degree of ptosis of the hollow viscera, complete cures may be effected by means of abdominal supports, tonics, building up of the nutrition and rest until the nerves and muscles have gained their normal tone. Liquid paraffin given in one-half to one ounce doses, two or three times a day on an empty stomach, has been found particularly helpful in this class of cases.

It is believed by the devotees of this subject that in the vast majority of instances, intelligent management by the internists will prevent chronic intestinal stasis and the milder degree promptly recognized and carefully treated by the measures outlined may be cured without recourse to surgical measures. Once allowed to progress to the more marked degrees of stasis with definite kinking and with clearly characteristic symptoms, surgery must be brought into requisition. The extent of operative interference must be contingent upon conditions found upon laparotomy. In some cases the cutting of the evolutionary bands and the restoration of the angulated or misplaced hollow viscera or other organs to their normal position will effect the return of the normal function and the disappearance of the symptoms. In other cases, particularly where the bands are formed with adhesions between different portions of the gut with possible involvement of other organs, such as ovary, gall-bladder, liver, etc., it is necessary to resort to ileocolostomy or colostomy.

**VARICOSE VEINS, THEIR RESULTS AND TREATMENT.\*****R. M. HOWARD, M. D., Oklahoma City****General considerations:**

Varicose veins have, since the early days of surgery, been a fruitful field for failures in our efforts to apply a curative treatment. Various operations have been devised for their cure, some effective, but many failures because they were not based on accurate knowledge of the normal anatomy and physiology. Ligation operations and divisions of the vein trunks have been the basis for most of them, but how far applicable a given operation may be is dependent upon the exact circulatory change present in the given case.

The recognition of this abnormal circulatory change requires a consideration of the normal venous return from the lower extremity. First, we must recognize that the venous blood which is to travel from the feet to the head, must rise some three and a half or four feet when the individual is in the erect posture. The veins which are to carry this flow are furnished with valves which divide them into a series of chambers. The valves are so arranged that they allow the blood to pass only towards the heart, each chamber then can only deliver its contents into the next one above. The force behind this is the weak capillary pressure and the movement of the leg muscles, aided by the emptying of the vena-cava, brought about by variations of pressure in the thorax. The great abdominal veins have no valves, which permits of a column of blood in these vessels only supported by the valves in the veins of the legs, a column which is feebly drawn forward and one that offers considerable weight against which the blood in the veins of the legs must rise, a column too, which is subjected to a considerable change in the intra-abdominal pressure. To meet this strain, the veins of the leg are arranged into two sets, the deep lying among the muscles and beneath the fascia well supported, and the superficial, lying in the subcutaneous tissue and supported only by the skin and superficial fascia. The two communicate by perforating veins in which the valves are set so that normally the blood can only flow from the superficial into the deep; a safety device which takes care of any temporary stasis. The surface veins are further divided into two systems, the greater or internal saphenous, and the lesser, or external saphenous. The great saphenous vein takes care of the return flow from the front and inner side of the foot and leg, passes upward and empties into the femoral vein at the saphenous opening. The small or external saphenous vein drains the back and outside of the foot and leg and empties in the popliteal space into the popliteal vein.

The principal physiologic features then of the venous circulation in the leg are as follows; the veins pass the blood upward through a series of chambers separated by bicuspid valves which permit only of an upward flow. This flow is favored by movement of the leg muscles, capillary pressure and changes in intra-thoracic pressure; the walls of the veins must support a column of blood whose weight is measured by the distance to the heart above, and inasmuch as the abdominal veins are valveless, the pressure upon the upper valves or upon the vessel wall if the valve becomes incompetent, is enormous, and is increased by the intra-abdominal tension. The deep veins of the leg have a strong muscular support while the surface veins derive small support from the superficial fat or skin; a system of vessels perforating the deep fascia communicates between them and owing to the arrangement of its valves, lightens to some extent the work of the latter.

A varicose vein in the lower extremity is merely a valveless vein, or more properly, a vein whose valves are incompetent. Taking into consideration this fact, the circumstances under which these changes are brought about and the changes that must necessarily ensue, and explanation of the various form of varices and a basis of treatment can be arrived at.

---

\*Read in Surgical Section, Oklahoma State Medical Association, May 10, 1916.



The most usual cause of these changes is hard, heavy work that requires a long continued standing on the feet and heavy lifting which greatly increases the intra-abdominal tension. Whether the valves become broken, or useless, through vein stretching is immaterial. A lesser cause is pressure from pregnancy, abdominal tumors and congenital weakness of vein walls, a condition often met in various structures of the body. These factors tend to produce the frequent large surface varicosities.

A smaller group arises from phlebitis, which often follows puerperal infections, post-operative complications, typhoid fever and various infectious diseases. These can usually be distinguished from the other type inasmuch as the changes which bring them about are widely different.

The varix, dependent on its cause, assumes one of two forms, i. e., that due to over-strain and stretching of the vessels and the other to phlebitis. In the first case the valves become useless, the vessel walls stretch until their nutrition is impaired, muscle changes to scar tissue and degenerative conditions rapidly arise. The veins become torturous, sacculated and thin-walled. As these changes are gradual, collateral circulation is established, the perforating veins aid and stasis is slow to develop, the changes for some time being confined to the larger trunks. The ulcers which occur are in direct relation to the vessels involved (often riding upon the veins). Their occurrence seems to be due to the chronic irritation consequent to the stasis of the impure blood in the vessel beneath as is shown by the pigmentation of the skin which often precedes their actual development. A frequent contributing cause is undoubtedly trauma, and the extent of the ulcer is dependent on the amount of infection present.

The perforating vessels, as a rule, do not share in the varicosity of the larger vessels, continuing for years to carry the stagnant blood from the surface veins into the deep system. When they do break down, however, the surface circulation is more embarrassed as the blood from the deep vessels can flow into the dilated surface veins and as a result, ulcers are more prone to occur and in areas independent of the veins themselves.

In the second and less common variety which develop from phlebitis, the valves are suddenly crippled, sometimes by the organization of the thrombus and by thickening of the vein walls and narrowing of the lumen, the circulation becoming just as ineffectual as through a large dilated channel. The great saphenous vein is hard, small, straight and thick-walled, the perforating veins are almost always incompetent and the disturbance of circulation in the surface veins is so great that ulcers appear early and are wide-spread, the whole leg often appearing very much swollen within a short time. The foot, however, rarely becomes involved in this process as it is well supported by the shoe and its circulation seems to be well cared for by the deep vessels.

For the purpose of treatment, we divide varicose veins into two classes, (1) Surface varix; (2) Surface varix complicated by varicosity of the perforating veins. In the first class come the majority of cases of gradual dilatation. In the second class advanced cases of gradual dilatation with incompetent perforating vessels and all of those cases coming from phlebitis.

There are certain clinical tests which when applied, demonstrate to us the extent of the damage. The first, devised by Trendelenburg, bears his name and shows the incompetency of the valves in the larger vessels. It is carried out as follows: the leg is raised above the level of the heart until the veins are empty, then rapidly lowered, when the blood can be seen or felt to flow back into the leg, rapidly distending the vessel. By such means, valvular incompetency of the surface veins as opposed to hyper-trophy, or distension of normal vessels, can be diagnosed. But still more information can be determined from this procedure by a slight modification which we term the "constriction test." Suppose it had already been determined that the surface veins allow a back flow, the leg is now raised and the veins emptied of blood. If, before it is lowered, a constriction only firm enough to com-

press the surface veins is made above the upper thigh, blood cannot flow from above into the superficial vein, and until they are filled by the natural circulation, they remain empty. On releasing the constriction, they are filled with a palpable shock. But this procedure tells even more, suppose the perforating veins share the varicosity of the surface vessels, the blood in the deep vessels will then be able, as normally it cannot do, to leak into the surface vessels and in applying the constriction test it will be found that in spite of the prevention of back flow down the superficial veins, these fill rapidly below the constriction. That is to say blood is finding its way out from the unobstructed deep veins through the incompetent perforating vessels to the surface. In varicosity of the surface veins alone, filling below the constriction takes place in three quarters of a minute or more, and even then these vessels may not be very tense, for the perforating veins are continually carrying off the excess of blood. If, on the other hand, the perforating veins are incompetent, the surface vessels will fill below the constriction, possibly in ten to thirty seconds according to the importance of the leak. These tests ignore the possibility of varix of the deep venous system, a very rare condition, if indeed, it is ever fully developed.

The diagnosis of surface varix is demonstrated by a positive Trendelenburg test and a negative constriction test and is never difficult except in the border line cases in which the superficial vessels fill slightly more rapidly than normal in the constriction test; and second, when there is a dense area of scar tissue as a result of a long standing ulcer of the lower leg. Under these circumstances, the diagnosis can be established only at operation. Simple surgical measures may be employed to cure surface varix, ligating the internal saphenous vein near its origin or removing a segment of it, often suffices. These procedures should only be used in instances of varicosity of the greater or lesser saphenous veins, when the perforating veins are proven competent. Inasmuch as collateral circulation may be established, and you may get a recurrence of the condition, it is thought best unless there are contra-indications, to do the radical excision. This consists of the removal of the greater part of the great saphenous vein and the lesser, if it be involved by some form of subcutaneous dissection. This is most often done by the use of the Mayo stripper, removing the vein to below the knee, then by long, straight incisions, turn back flaps of the skin and fat down to the deep fascia, removing the vein from the inside of the flap. The cure of the ulcer depends upon the thoroughness of the dissection. It is often advisable, however, to remove the thick, impenetrable base of scar tissue in order to more surely get a permanent healing, otherwise the poorly nourished tissue may harbor a leaking, perforating vessel not disclosed by the test and we may never get a permanent healing. If this is deemed best, it is often necessary to cover the defect with Thiersch grafts to more promptly get sound healing. Careful asepsis must be preserved as we are dealing with tissues of low vitality. The wounds are perhaps best closed loosely with subcutaneous catgut sutures, using no stitches that pass through the skin.

In the case of simple varix, complicated by varicosity of the perforating veins, the varicose vessels may be numerous and prominent or few and almost invisible. In the second instance, the patient's discomfort may be greater than the degree of varicosity warrants. Ulcers, particularly in those whose circumstances prevent them from nursing their ailments, are common. The constriction test shows that the vessels fill rapidly below the constriction by way of the perforating channels. The most difficult to classify are those with marked scar tissue formations and those that have great obesity, also those that result from phlebitis. The tests in these cases are difficult to interpret and one must often infer the diagnosis by the absence or presence of cyanosis in the lower leg during the performance of the test. In the treatment of these complicated conditions, the selection of the surgical procedure to be applied is important. In addition to the dissection of the main trunks, we must carefully remove many smaller vessels and carefully dissect the perforating vessels, for if these be left, and often we find them directly beneath the ulcer, they will continue to remain a source of venous stasis. It is frequently necessary, too, to remove large areas of scar tissue and ulcers, making at times a

rather formidable operation. In some instances we find the whole leg edematous and a mass of ulcers and in these cases the spiral incision down to the deep fascia may be applicable. Usually, however, by numerous incisions, sometimes by repeated sittings, we can finally effect a cure even though most of the superficial vessels are destroyed in the process and the limb remains edematous for a time.

Varix of the lesser saphenous veins may be present in both types, either alone or associated with varix of the greater veins. Bearing in mind the location of the vessel and using the usual tests, the condition is easily diagnosed. We should not forget that abnormalities may be present in both systems, and that if found, they must be dealt with. Unusual cases will be met that require careful study and not all will fall under the classification here referred to. Operation on such will require a careful consideration of the collateral circulation and the physical status of the patient.

All patients with varicose veins should be kept in bed several days before operation. It is not necessary, however, to wait for a healing of the ulcers, they will heal much more rapidly after operation. When the work is completed the leg should be firmly bound from toe to hip and it is probably best to apply a splint to the ankle and the knee. At the end of two weeks the healing should be complete and the patient allowed to be up. A supporting bandage should be worn for several weeks.

The treatment of varicose veins and their complications has been sadly neglected by the profession. There are many individuals who suffer for years or are actually prevented from carrying on their work who could be cured by a simple operation. Not long since, I had a man come into the hospital for treatment who had not been able to assume the upright position for months because of extensive varicose veins and ulcers of the leg. This was a case of simple surface varix that was easily cured, the man returning home in six weeks completely restored to health and able to earn a livelihood. Not all of our cases give such satisfactory results, but most are cured and the others greatly relieved after operation.

In writing this paper, I have drawn freely from the current literature and standard works on surgery as well as from my own experience with cases I have recently operated on. Most of my cases have been of the classical type and to review them here would only add unnecessarily to the time and give you no points not already covered in this paper.

### Discussion

**Dr. Curt von Wedel, Oklahoma City, Okla.:** I was very interested in Dr. Howard's paper. It was a most excellent paper, the best I have ever heard. It has been my good fortune within the last two or three days to have a case of varicose veins of both the perforating and superficial veins. Dr. Howard mentioned some important facts that should always be borne in mind—first, that the usual cause of failure in varicose veins is because we do not recognize the perforating condition. It is a very simple procedure to cure simple varicose veins, but when the deep perforating veins are varicose, the old Shrader operation was often followed by a condition, if anything, worse than before the operation, because the communication with the perforating veins still existed, and the circulation above was cut off. This, as you can see, only increased the varicose condition.

As a rule it is difficult to find these perforating veins. This morning I was fortunate enough to very easily locate the perforating vein. The constriction test showed that the vein would fill in about forty seconds above the knee, and below the knee they would fill in ten seconds—meaning that above the knee there was no varicosity of the perforating veins, while there was below the knee. Upon operation, a very large communicating vein was found.

Dr. Howard mentioned in his paper the rarity of varicose veins of the foot. Of course that is true, especially among people that wear shoes, but often we find this condition among people who wear ill fitting shoes which do not give support.



The chief point I think that Dr. Howard expressed which must be remembered, is that we must know whether there is a communication with the perforating veins, and if so, find it. Otherwise, the cure will not result. I think the best procedure to take in these cases where there is a varicosity in the perforating vein, is to make an incision down to the deep fascia. Tie the perforating vein below the deep fascia. Then dissect back a flap containing the vein. Remove the vein and fat from the flap and replace the flap. Use very few sutures. As a rule, the circulation in the flap will remain unimpaired. Occasionally we may be compelled to graft.

**Dr. Howard** (closing): Mr. Chairman, I have nothing more particularly to add, except to emphasize the points that Dr. von Wedel brought out. We must remember to take care of these perforating vessels. There will be a small number that will give us trouble, but unless we have classified properly the case we are dealing with, and then care for these perforating channels, we are incompetent and we will get more failures than we should in doing this work.

### ABDOMINAL DRAINAGE FROM AN ANATOMICAL STANDPOINT.\*

C. VON WEDEL, JR., M. D., F. A. C. S., Oklahoma City

Within the last ten years, several notable papers on the mechanics of abdominal drainage have been written—chief among which are those of Clark, Fowler, Yates, Coffey and Curtis.

R. C. Coffey, in a most admirable paper published in the March *Journal* of the American Medical Association for 1907, shows clearly that the most effective means of draining a cavity, especially in the accumulation of large amounts of fluid, is by means of gravity. Yates has shown by experimentation that any form of drain is isolated in the free peritoneal cavity in the course of a very few hours.

Having in mind Coffey's masterly article, and desiring to explain the uncertainties of drainage, I experimented in the Anatomical Department of the University of Oklahoma with several bodies. Coffey correctly contended that an angle of fifty-one degrees was necessary to overcome the dam formed by the psoas muscle which divides the flanks from the pelvis. After removing the liver, spleen, small intestines, and transverse colon, I filled the upper right flank with fluid, allowing the body a prone position. In this position, with an elevation of ten degrees to overcome somewhat the psoas dam, it required a lateral angle of considerably over thirty degrees to spill fluid from the right flank over the spinal division into the left flank. With small amounts of fluid in the flank, it is almost impossible for this fluid to gravitate into the opposite flank unless the subject be turned squarely on its side. Consequently, it can readily be seen that in order to efficiently drain the flank by purely postural means, it is necessary to elevate the body to sixty degrees, and rotate at least thirty degrees toward the side we wish to drain. This degree of rotation and angulation makes a very difficult position for the patient to rest in, even with the most improved of beds. In order to overcome this forced postural drainage, it was found that a low flank drain with a rotation of thirty or forty degrees, and an elevation of from fifteen to twenty degrees, would completely empty either flank. The most effective site for placing this drain is about one inch above and squarely external to the colon. Drainage internal to the colon will invariably cause infection in the cellular tissue around the kidney.

A flank drain is easy to place and rapid in emptying the flank, especially if care is taken to place it at the most dependent point. This point is midway on a line drawn between the anterior superior spine and the ribs. This procedure is far easier, and anatomically quite as dependent as the more difficult method of Bidwell, who places his drain through the loin into the sub-phrenic spaces. In passing, I would mention this rectal drainage of the pelvis, advocated by Curtis and Bidwell, but to condemn it.

\*Read before the Surgical Section, Oklahoma State Medical Association, May 10, 1916.

In considering the proper place in the abdominal wall through which our drain should go, we must consider first the basic principles which were laid down by Coffey—namely: that the drain should be placed externally to a line drawn from the symphysis to the tip of the shoulder. This line runs through the deepest portion of the abdominal cavities, and generally speaking, is external to the small intestines.

In the drainage of the right iliac fossa, drainage either through or underneath the rectus muscle should be avoided. Drainage through the rectus muscle is very liable by pressure or extension to involve the deep epigastric artery with its very dangerous sequellae of secondary hemorrhage. Personally, I have had this experience in two cases, one of which was very nearly fatal. Drainage underneath the retracted rectus is likewise bad, as the rectus is apt to compress the drain, preventing the evacuation of the fluid. One should not place a drain too close to the anterior superior spine as at this point, about one-half inch internally, lie the hypogastric and ilioinguinal nerves. Pressure on these nerves by the drain, or their destruction by the extension of the infection, will cause atrophy of the arch fibers of the internal oblique and conjoined tendons. This, I believe, is an explanation of the reason for so many cases of right inguinal hernia following extensive drainage through the MacBurney incision.

If the pelvis is to be drained through the abdominal route, the drain should be placed squarely through the linea alba. If by chance the rectus sheath should be opened, we should at once close it, as many cases of deep infection of the wall and troublesome healings can be avoided by shutting off this avenue for the spread of our infection. In the same way, care should be taken that the peritoneum be sewed to the wall, so as to prevent an infection in the space of Retzius. These precautions should be taken immediately upon opening the abdomen, and before any extensive pelvic procedure is undertaken. By this means we avoid to a great extent the extensive destruction coincident with abdominal pelvic drainage, and liability to post-operative hernia.

In the drainage of accumulations of large amounts of fluid in the right hypochondrium, we have to deal with a simple process, provided the fluid is located in one flank. It sometimes happens, when our patient is very restless and tosses from one side to the other, that the pus is spilled over the spinal division into the opposite flank. As noted earlier, it is best to drain with a low flank stab external to the colon. Great care should be exercised to avoid the drain pressing upon the colon.

In dealing with retro-caecal and other retro-peritoneal accumulations, one should make a direct stab wound puncture, draining at the most dependent point. This is especially so with retro-caecal conditions, as promptness and efficiency in drainage decreases the chances for subphrenic complications.

It is not within the scope of this paper to take up peritoneal drainage in detail, but only to mention some of the salient and oft unthought of anatomical considerations with which we have to deal. One must of course deal differently with the many hundred possible localizations of pus within the abdominal cavity. Each in itself presents separate anatomical and technical difficulties.

### Discussion

**Dr. Fred S. Clinton, Tulsa:** Mr. Chairman, like the essayist, I think the best discussion next to his paper of which I have any personal knowledge at this time is an article presented by R. C. Coffey of Portland. I have read that several times with considerable interest, and I think the one most practical thing to us who do considerable emergency work would be the stab drain for retro-caecal and peritoneal accumulations. I think that one point, if we did not learn anything else in the matter of drainage, would be worth many trips to this Association. I think the paper is concise and complete and comprehensive. I thank you.

**Dr. George D. McLean, Oklahoma City:** Of course Dr. von Wedel's paper

brought out the proper methods of drainage and my assumption is that this drainage is accomplished with the patients on their backs. I do not know who else, but somebody else found the method of draining by turning the patient immediately on his abdomen. Out of a good number of cases operated in emergency conditions, not a single one that we did not get improvement and a recession of the abdominal symptoms. I think I saw about twenty cases operated while in England and these men put an ordinary stab drain and used pieces of rubber finger to drain through, and the patients were turned immediately on the abdomen, putting the right side a little lower than the other, and the patients got along much better than those who were placed on the other side.

**Dr. W. G. Lemmon, Tulsa:** There are a few points in Dr. von Wedel's paper I want to speak of. Dr. von Wedel, in speaking of drainage, spoke as if posture and gravity are the only essentials in drainage. It is a fact that some patients will drain in two or three days and close up; whereas the abdomen will drain for some weeks, showing that the gravity is not the same for all of these cases.

**Dr. von Wedel (closing):** I am very glad that Dr. McLean and Dr. Lemmon and Dr. Clinton discussed the paper. Relative to the abdomen drain—lying the patient on the abdomen; the paper was not gotten up with the intention of pointing specifically to the drainage of all abdominal conditions. Unless we deviate the fluid from the highest part from underneath the diaphragm, death occurs before an effect of drainage can take place. Drainage must take place within the first few hours.

Relative to this case of pelvic and abdominal drainage, of course, if we could keep in a glass tube and if the peritoneum would not oscillate within a very few hours; viz: if we did not empty the right flank immediately, we are apt to spill into the left flank, consequently, the postural drainage is to empty immediately the accumulations of large amounts of fluid and not allow the fluid to empty back into the left flank.

I have confined my paper only to the considerations of the abdominal drainage.

---

### INTESTINAL PARASITES.

E. J. Van Lier, Madison, Wis. (*Journal A. M. A.*, Nov. 4, 1916), has examined the stools of twenty students in the University of Wisconsin for intestinal parasites. There is no doubt but that the Oriental immigrants are a public danger in this way. An inspection in San Francisco by Glover showed that of 1,002 Chinamen examined, the majority had intestinal parasites, and of 1,484 Japanese, a somewhat less percentage were infected. These were largely of the laboring class, while the subjects at the University of Wisconsin were undoubtedly of a much higher class, and less likely to be infected. The feces of twenty male foreign students attending the University of Wisconsin were examined and ten (50 per cent.) gave positive results. The infections were as follows, the figures referring to the number of the patient: (1) Hookworm and *Trichocephalus dispar*; (2) *Hymenolepis uana*; (3) *Schistosoma japonica*; (4) *Ascaris lumbricoides*; (5, 6, 7, 8, 9, 10) *Trichocephalus dispar*. The infected individuals in the several instances showed disorders connected with the presence of the parasites. The details of the examination and conditions of the subjects examined indicate that seventy per cent of the twenty students showed symptoms that might be due to parasitic worms and requiring medical attention. The examination shows that there is danger of infection from the average foreign student. Other persons doubtless carry parasites at times, but the percentage of infection among foreigners, and particularly Orientals, is very large.



## RACHIOCENTESIS.

LEA RIELY, A. M., M. D., Oklahoma City

Rachiocentesis, lumbar, or thecal puncture, is of comparative recent origin. Quinke first drew attention to his investigations of it in an article entitled "Lumbalpunktion" in the Berlin Klinik in Wochenschrift, 1891. In 1892 he published a work on "Die Technik der Lumbalpunktion."

Its idea has been made possible and harmless since our conception of aseptic conditions, until now very few diseases but what need it in a very thorough examination, and in the treatment of certain troubles this procedure has marked an epoch in medicine, because of the brilliancy of its results.

The operation of lumbar puncture may be performed with the patient sitting up or lying down on his side, with his knees and chin approximated. In children I generally use the first method with nurse holding them over the shoulder. In adults I practically always use the latter method, always seeing that they are firmly held to prevent turning and breaking off the needle. The puncture may be made while the patient is in the sitting position, particularly if the fluid is hard to obtain. Spinal anaesthesia while patient sitting up.

The place of puncture is the space between the vertebral spines next below a line made by connecting up the highest point of the iliac crest of each side, i. e., between fourth and fifth lumbar vertebrae, so chosen because (1) it is way below the termination of spinal cord, which is on a level with the first lumbar vertebrae; (2) this space is the largest of all; (3) presence of transverse septa and possible adherence of arachnoid membrane with the posterior surface of the cord from the cauda up into the cervical region; (4) some claim the cellular and bacterial elements gravitate to the lowest portion.

This procedure can be carried on with a general anaesthetic, a local anaesthetic, or none at all, as it is not accompanied by much pain. The puncture may be made in the midline, or one half inch to the side midway between the two spines selected as guides, and passes forward with an upward tendency until you feel the resistance of the ligamentum subflavum, or the almost unavoidable one of striking a lamina. In the former event you can feel the sudden loss of resistance and the needle is in; in the latter event you steer your needle at another angle when you feel the crepitus of the bone. The last resistance is as it pierces the dura.

The normal cerebro-spinal fluid flows out of the needle about twelve drops to the minute; it is clear and limpid, with a specific gravity of 1.006 or 1.008 alkaline and contains a trace of serum globulin and of albumose, and a substance which reduces Fehling's solution. Microscopically, a few large endothelial cells and an occasional lymphocyte 4-12 per c. m. m.

Hemorrhage arising from spinal puncture may be epidural or subdural. If pure blood flows out through the needle, the source of the hemorrhage is epidural. If blood tinged cerebro-spinal fluid is drawn, the source is subdural. (Quinke). Fluids showing globulin are said to be the result of inflammation of the meninges and we have never seen occasion to doubt it. Indeed, it is the most important of chemical tests, because it separates fluids due to meningism from those due to true meningeal infection. (DuBois and Neal).

By meningism is meant that condition in which meningeal symptoms arise in the course of some disease, the cerebro-spinal fluid being increased in amount but normal in character, it is an internal hydrocephalus. A condition of meningeal irritation due to toxins of infection outside of the nervous system without organisms or active inflammation within the meninges.

The cerebro-spinal fluid is a secretion of the cubical cells of the choroidal plexuses of the lateral ventricles and of the perivascular lymph spaces. Normally the fluid has free passage from the lateral ventricles to the third ventricle, then through the Aqueduct of Sylvius to the fourth ventricle, and from there is distri-

buted through foramina into the subarachnoid space and from this reservoir over the cerebrum, the cerebellum, and downward into the spinal arachnoid. The whole normal quantity of the cerebro-spinal fluid may be secreted in three or four hours.

The symptoms of any form of meningitis are due to the toxins of the germ infection plus increased cerebro-spinal pressure. If this pressure is sufficient to cause coma, repeated spinal puncture will relieve it, and such drainage is theoretically indicated. Of course, in spite of relief of such pressure, patient may die of toxæmia. (*Journal A. M. A.*, Dec. 25, 1915).

I recently had a case of typhoid with exaggerated reflexes, McEwen's sign, mental stupor, difficult hearing, Kernig's and Brudzinski's sign, propulsive vomiting, dilated pupils, etc., which on relieving the spinal pressure, by withdrawing 60 c. c. of fluid, the symptoms subsided and patient began to improve in a most remarkable manner. I have seen wildly delirious pneumonic and typhoid patients who took several to hold in bed, become docile and easy to manage on relieving the intraspinal pressure. I know of no better way of treating delirium tremens than by removing the intraspinal pressure. Such a procedure will calm down your patient and procure your much desired rest, which almost toxic doses of opiates and sedatives have failed to produce.

Meyers thinks that tubercular meningitis is not so rapidly fatal now, on account of lumbar puncture being more frequently done, thus preventing early deaths from cerebral pressure. He finds lumbar puncture prevents convulsions, which became rare in the clinical history of the disease so treated. He thinks it not only relieves pressure, but eliminates a certain amount of toxin. The fluid in these cases was never really turbid and was generally clear, the cell count varied from 24 to 960 per c. m. m. with an average of 198. The cerebro-spinal cell count seems to vary with the leucocytic count of the blood. The first part of the spinal fluid withdrawn at each puncture has a different cellular content from the last withdrawn, the first giving the greater number of cells.

One of the most brilliant results of modern medicine is the universal results of Flexner's serum in epidemic meningitis. It has done for this disease what antitoxin has done for diphtheria. Even the repeated withdrawal of spinal fluid before the advent of serum ameliorated the nervous symptoms and frequently saved life, and even after the germs are no longer to be found and serum no longer used, the removal of spinal fluid is necessary during convalescence of a great number of cases. The early lumbar puncture helps you to make an early diagnosis and is the only way to make a sure diagnosis. The first c. c. of fluid is the most abundant with germs and should be the one to examine microscopically.

Cerebro-spinal syphilis can be diagnosed before the clinical symptoms are at all accurate by the puncture and examining the fluid for an increased lymphocytosis. The positive Wasserman reaction to the spinal fluid with increased cell count when blood reaction is negative bespeaks accuracy in diagnosis. To say nothing of the intraspinal treatment of spinal lues which is in its infancy. Syphilitic headaches are relieved by reducing intraspinal pressure. I relieved convulsions of eight hours duration in a syphilitic by merely withdrawing 65 c. c. of spinal fluid, which showed a positive Wasserman and increased cell count.

Flexner says lumbar puncture provides the one clinical method at present known for clearing up the diagnosis of atypical cases of poliomyelitis or for determining the nature of the typical affection prior to the appearance of paralysis.

Purves Stewart says that in the diagnosis of hemiplegia, whether due to thrombosis or apoplectic hemorrhage, the bloody or stained yellow fluid in the latter and clear fluid in the former.

Since the treatment is so diametrically opposite, it is well to differentiate.

Fractures of the skull, especially the cranial base, give a uniformly red fluid with hemolysis of the cells and in the event of infection your red color is accompanied by an increased polymorph. count.

Several observers have reported the clearing up of coma, convulsions and headaches within a few hours after the withdrawal of more or less fluid in what had heretofore been an irremediable state of uraemia from acute or chronic nephritis, such as you find in uraemia and eclampsia. This experience suggests at once the conclusion that headaches, coma and convulsion may not be caused entirely by uraemic poisoning of brain centers, but may be largely due to sudden increase of intra-cerebral pressure, a part of general edema. (Smith).

Shonback says that lumbar puncture seems to have only a briefly transient, if any, injurious action on the healthy, but the consequences may be disastrous in pathological conditions. There seems to be no absolute contraindications, but it is safer not to apply lumbar puncture in case of hemorrhage in the skull or vertebral canal or intracranial tumors, especially those in the posterior cranial fossa. Aspiration and ambulant lumbar puncture are vigorously denounced. The main dangers are hemorrhage from vacuum action and obstruction to communication between the various cavities.

The precautionary measures that should be enforced in case of intracranial tumors or similar processes are twenty-four hour preliminary bed rest, puncture with patient lying on his side, the head low, one or two days bed rest afterwards, and the head lower for the first twelve hours, avoiding any alcohol or excitement afterwards.

### PERFORATION IN TYPHOID\*

LeROY LONG, M. D., Oklahoma City

About 9 o'clock on the night of October 24, 1913, after an illness due to typhoid fever for ten days, Robert T., white, 27, complained of a severe pain in the abdomen accompanied by a sensation of chilliness. He was given 3j doses of camphorated tincture of opium. He had two or three doses without relief, and then, through a misunderstanding on the part of the attendants, two or three doses of aspirin were administered, but the patient was extremely uncomfortable all night.

At 9 a. m. on October 25th, he had a subnormal temperature, shallow breathing, an anxious expression, a moist, cool skin, and still complained of pain. It was thought that the aspirin might have had something to do with the subnormal temperature, but the significant thing in the general picture he then presented was the undoubted fact that *he was decidedly worse than he was the day before, and that this change in his condition had begun suddenly.* However, notwithstanding the presence of the symptoms I have enumerated, there was hesitancy in concluding that the patient had a perforation, chiefly on account of the short period of illness.

About 4 o'clock in the afternoon the nurse (a trained nurse had been placed in charge of the patient that day) reported the pulse faster (126) and not of good quality; the abdomen rigid; the temperature rising (then 102); that the patient still complained of pain and looked very bad. When seen a few minutes later his condition was as described by the nurse, except that his pulse had increased in rapidity, it being then 132. It seemed pretty clear that he had a perforation, and an immediate operation was advised. At this time he was given a hypodermic of 1-4 morphine.

There was some delay on account of the patient being unable to make up his mind to consent, but he was finally in the hospital at 8:15, and at 8:40 he was taken to operating room.

In order to economize time the abdomen was prepared while the anesthetic (ether) was being given. A free rectus incision was made, and through it greatly distended coils of small intestine immediately escaped. With but little difficulty a perforation was located in the ileum, it being situated on the antimesenteric border about ten inches from the ileo-cecal junction. It was perfectly round, a little

\*Read before the Section on General Medicine, Oklahoma State Medical Ass'n, May 10, 1916.



smaller than an ordinary lead pencil, the edges greatly thickened and indurated, it having the appearance of having been punched out with a harness maker's tool. There was some lymph clinging to the margins and floating in the fluids about the lesion, but *there were no adhesions as are usually seen in connection with pyogenic inflammation.*

The perforation was closed by a purse-string suture, the distended intestines replaced with some difficulty, three rubber drainage tubes placed in the abdomen, and the wound quickly closed with through and through silk worm gut sutures, it being considered that time was the essence of the requirements in such a late operation after the perforation was closed. The patient was taken to the operating room at 8:40 and was returned to his bed at 9:15. Probably about twenty minutes was consumed in the actual work of the operation after the anesthetic was given.

The patient was put to bed in Fowlers position, half strength normal saline solution was given by proctoclysis—for the first twenty-four hours a pint every two or three hours, then less often for next two days. The after-history, so far as the general condition of the patient was concerned, was entirely satisfactory. The pulse improved in character, not going above 100 after first two days, and dropped to the normal rate at the end of one week. There was a post-operative rise in temperature to 101.3-5, after which there was a lower afternoon temperature each succeeding day, with a distinct tendency to defervescence, which was complete on November 10th, about sixteen days after the operation. As expected, the suture line became infected from the drainage, but it gave no trouble except locally. As expected, too, healing was followed by an incisional hernia which the patient still has, but which is not giving him trouble. He left the hospital on November 22nd, and was down town within a week. He is now, and has been ever since his recovery from his typhoid, entirely well.

In this connection I wish to call your attention to several important points, in the hope of encouraging the rendering of prompt and radical service—the only kind that will do any good—to patients who may have the misfortune to fall into this class in which only the direst consequences can take place under a palliative procedure.

1. The possibility of perforation early in typhoid. In this case the man had been sick only ten days. The time is pretty clearly fixed for the reason that there was not the usual delay in making a diagnosis, he developing the disease during his wife's convalescence from it, and the natural conclusion being that his disease was typhoid; and again for the reason that rose spots had just appeared. Cases are reported as occurring during the first week. They are not common, it is true, but the possibility should be borne in mind.

2. *The sudden development of a distinct change for the worse in the case of a patient suffering of typhoid.* In my judgment, this is an extremely important matter to consider in trying to arrive at a correct conclusion. In the early case, as in the case I have reported—the case in which the patient's mind is clear, permitting him to give a reliable and intelligent recital of the subjective symptoms, there is a history of sudden abdominal pain, usually accompanied by chilliness—and *this pain does not abate.* Objectively, we find in connection with this history stiffening of the abdominal muscles, frequent, shallow respirations, sudden increase in the pulse rate. This syndrome should, in my judgment, justify immediate operation.

When the patient has been sick for a long time; when he already has abdominal distention; in the patient whose mind is not clear, the proper interpretation of the condition may be particularly difficult. But even in these cases, if a careful analysis of the symptoms is made, paying attention to all the details, the true condition should not be often overlooked. The first significant thing that the physician will notice is that *the patient has become decidedly worse, and that this change in his condition has begun suddenly.* This is, to my mind, a point of superlative importance. If, in connection with this history of having become suddenly worse, the respirations are faster and shallower, the pulse increased in frequency and there are evidences



of restlessness and collapse, a diagnosis of perforation should be made, and, if the patient is not moribund, an immediate operation should be advised. It is understood, of course, that hemorrhage is another dangerous complication of typhoid, and it is assumed that proper steps are to be taken to exclude its existence—and, in the average case, it is usually not difficult to do it.

3. The blood count is not a reliable guide. Usually, even after perforation in typhoid, the white cells are not increased to such an extent as to be at all conclusive in connection with the question of perforation. It has been suggested that in typhoid a white count be made as frequently as the temperature is taken in the hope that if perforation occurs it might be indicated by a steady and uniform increase in numbers. In the suspicious case seen soon after suspicious symptoms have appeared, it might be well to make the count every hour. However, it would seem that, unfortunately, the blood count in this condition does not give very reliable information.

4. The obliteration of the normal liver dullness on account of the increased abdominal distention has been dwelt upon by certain authors, but in practice it, too, seems to be a sign without much importance. In the early case there may not be much distention; in the case developing late in the course of typhoid the liver dullness may have been obliterated by the general distention before the occurrence of the perforation. It would seem fair, then, to conclude that this sign should be given only a slight relative value.

5. In the average case the operation should be rapidly done without any reference to the possibility of the development of an incisional hernia subsequent to the operation. We are operating upon a patient who has a grave surgical emergency engrafted upon a grave general infection, and our whole procedure should be based upon what we conceive to be necessary to give the patient the best opportunity to *live* over the present emergency.

6. The operation should be done as early as possible. In the case I have reported it was late. While the result may show that we should not despair, even in the late case, it would seem far better to do the operation within the first twelve hours after perforation.

7. The records show that much of the mortality from typhoid fever is due to unrecognized perforation. It occurs in about three per cent of the cases—I do not mean of the cases that die, but I mean that about three persons out of every hundred who have typhoid will have a perforation. It is difficult to definitely arrive at the mortality of typhoid, but it is probably somewhere between six per cent and twelve per cent. If, therefore, three per cent of patients have perforation, it may be seen what a frightful element perforation is in the mortality—anywhere from one-fourth to one-half the patients who die, die of perforation. If we remember in this connection that the accident occurs three times as often in the male as in the female, and that most of the cases are in young adults, we have another clue that may help us to come to a timely and life-saving decision. One-fourth to one-half of our typhoid mortality has been due to perforation—and how many times has the diagnosis been made promptly? How many times has the only procedure that offers hope—prompt operation—been provided for?

### Discussion

**Dr. C. S. Bobo, Norman:** I am very glad to have heard Dr. Long's paper. I think it is one of the most timely medico-surgical papers I have ever heard. I am sure we are all misled in regard to the importance of the early diagnosis of perforation in typhoid fever. I think Dr. Long's percentage of the cases of death occurring from too late diagnosis is placed at a very conservative base, because it is out of the general rule to have typhoid fever cases die unless there is a perforation. A great many more cases die from perforation than from the general toxemia of the disease.

I call to mind now a case on which I was called in consultation in an adjoining county, a very prominent man. The night before he had had a very severe stab-

bing pain in his abdomen, his pulse was up and his abdomen was becoming distended. I suggested an operation but he refused, and the attending physician did not think the operation could avail anything, and I think that today that man would be alive if the operation could have been performed.

**Dr. A. K. West, Oklahoma City:** A very important contribution, and it impresses me that both physicians and surgeons ought to be particularly impressed with an operation of this kind. We operate on appendicitis, and we feel we have saved a life. We operate in a great many cases and save lives, but it only occasionally occurs in certain instances, this being one, that when we operate we know we have saved a life. The patient is already dead to all intents for there is no hope. Therefore, when they live we know we have saved a life by operation. The time element is very important. It should be done quickly. Get in quick, get out quick when the diagnosis is made, and that should always be done early and give the patient the only hope he has to recover.

**Dr. Anderson:** I do not question the idea of operation in cases of typhoid fever, but I simply want to make a report of a case I had last year. A man about fifty years of age had been sick with typhoid fever about two weeks. There was practically no question about his having typhoid. Two children of his followed him with typhoid. This man, about two weeks after he had taken sick, along in the after part of the night, developed very severe abdominal pain. I went out to see him and gave a hypodermic of morphine that relieved him some, and I think it was about four hours later that they called me back again. The pain had increased. At that time there was considerable rigidity of the muscles of the abdomen, the abdomen was beginning to distend and the man was vomiting every fifteen or twenty minutes, there was no question in my mind about a perforation. I told the family there was probably no question but what the patient would die. This went on about two or three days, the distension increased and I do not think I ever saw a gaseous distension greater than in that man, but what I want to say is, that the man finally recovered.

**Dr. F. B. Stobaugh, Mannsville:** I fully enjoyed the paper. It expressed the truth in a great measure. I want to say that perforation, in my mind, is responsible for 80 per cent of the fatalities we have in typhoid. I have had the experience twice in the country, where I have simply opened the bowels and put in a drainage tube and raised his right side and my patients have gotten well. Give him some kind of an operation. If you have a sharp pain in the bowels, make some kind of an operation to relieve him.

**Dr. A. S. Risser, Blackwell:** There is one suggestion that I think ought to be made, and that is the use of the local anesthetic instead of general anesthetic when the vitality is low. You can take more time and it is very easy under the local anesthesia to make the operation.

**Dr. C. W. Heitzman, Muskogee:** Dr. Long has brought to our attention, one of the diseases which has been rightly denominated a border line disease. Such diseases must bring about an intimate relationship between the physician and surgeon. In this class of diseases when the physician is in the least bit of doubt he should call in the surgeon. All deaths from typhoid do not take place from perforation. We may have typhoid fever without any local manifestation in the bowels. Like pneumonia, it is a misnomer. The fact that in the first instance the bowels are affected and in the latter the lungs, simply means a local manifestation of the disease. Either may produce death without the bowels or the lungs being involved.

**Dr. Long (closing):** I thank you very much gentlemen for your kindly references to this paper. The statistics I gave were from Dr. J. T. Finney of Baltimore.

Dr. West, I think, has made a point that it is practically a hopeless case without operation. I think it is possible that once in a while a case gets well. The main thing for you to do is to make the diagnosis in time to do something for the patient. If we wait too long we can do him no good. He is better able to respond when the operation is taken early. The later cases give us the most trouble, when the patient is not at himself, when he has some abdominal disturbances, this general condition should be thoroughly investigated.

The point Dr. Risser made of doing the operation with a local anesthetic is a splendid point, and we can do most anything now if we take long enough time, and under the local anesthetic we can take time.

---

## A STUDY OF TERATOLOGY, WITH PRESENTATION OF SPECIMEN\*

W. W. WELLS, M. D.

Obstetrician to Wesley Hospital, Oklahoma City

The word terata may be applied to any abnormal growth but is best applied to monsters. The cause of teratoid tumors or teratomata is to be sought in congenital maldevelopments as the dermoid cyst.

Teratology is the sum of what is known of monsters. Congenital deformities are not rare. A child born with a deformity so marked that it interferes with the general or local development of the body, is called a monster. Monsters often die in the early formative stage, or if delivered alive they usually die within a few hours, or days, being incapable of extra-uterine existence.

**Antenatal Pathology:** During the period of embryonal life, which is computed by various authors at from six to twelve weeks, what is known as organogenesis occurs. In other words, the future organs of the body are rapidly differentiated from the primordial embryonal tissue, so that at the termination of this cycle they have attained almost complete development. During the remainder of intra-uterine life there is little more than an increase in size, just as in extra-uterine life. It seems most natural to suppose that diseases in the embryo must be manifested by arrested or perverted development of organs rather than by ordinary pathological alterations. A slight malformation of an embryonal organ must increase in size with the growth of the latter; in no other way could the occurrence of extensive malformation be explained. Professor Mall of Johns Hopkins University states that after the second week pathological conditions are readily recognizable.

Diseases of the very young ovum are of two kinds, viz: primarily embryonal and primarily chorial. In the first, the embryo is affected while the development of the chorion is unchanged. In the second, the disease of the chorion results in the strangulation of the embryo. The affections may be represented in three degrees: First, simple arrest of development. Second, partial destruction of the embryo. Third, total destruction of the same.

In the majority of cases, according to Mall, the pathological process is in the embryo. The chorion is endowed with great vitality and is able to exist and undergo normal development for a considerable time after the death of the embryo, but finally, its independent existence comes to a standstill and it either persists as a cystic formation or collapses into a fleshy mole. On the other hand the embryo undergoes rapid destruction, if the chorion becomes affected. In computing the period at which abortions occur, we must be guided by the degree of development of the chorion and not by the embryo, as in simple arrest of development we note a two weeks embryo in a four weeks ovum.

Causes are divided into internal and external. Recent experimental work has

---

\*Read before the Wesley Clinical Society, April 16, 1916.



shown that it is quite certain that external agencies have much to do with the formation of monsters. Heredity has a great influence, since the same peculiarity is seen in several members of the same family. A generation may be skipped and the deformity appear in the third generation. These natural causes are not yet understood, therefore, they are called germinal, since they are inherent in the ovum. That the sperma has some influence in the production of monsters is proven by the experiments of Bardeen, who saw deformed ova result from fertilization by the sperma of toads which had been exposed to the X-ray.

Of external causes may be mentioned injury to the abdomen or uterus, diseases of the uterus, perhaps gonorrhoea, diseases of the chorion and amnion, abnormal implantation of the ovum in the tube, arrest of development as the result of thermic, chemical or other physical action. It has been proved that lithium, sodium, potassium and magnesium have a special selective action on the cells of the morula and produce characteristic monsters, some of the poison affecting the nervous system and other the heart.

Stockard and Lewis produced 50 per cent cyclopiian monsters from the eggs of the common minnow by treating them with solution of magnesium chloride. Hertwig suggests, and DeLee agrees with him, that chemical poison circulating in the maternal blood may affect the embryo and cause monsters.

Nowadays but few practitioners, and no scientists, believe the old notion that the mental state of the mother has a direct influence on the development of the child, but many careful observers, among them DeLee and Ballantyne, are convinced that shock, worry and deprivation may produce vascular and nutritional disturbances of the endometrium, which may affect the growth of the ovum. Mall believes amniotic adhesions to be secondary rather than primary. Syphilis must be emphasized in the production of monsters.

Monsters are divided into two classes, single and double.

Single monsters are of three varieties: First, *monstra per defectum*; where all or part of an organ is missing, viz: *acrania*, *anencephalus*, *microcephalus*. Second, *monstra per fabricum alienam*; where an organ is wrongly formed or misplaced, as heart, kidney, testicles or colon. Third, *monstra per excessum*; where an organ is enlarged or duplicated as *hydrocephalus*.

Double monsters come from one ovum and are developed from one germinal vesicle. Two germinal spots, two primitive streaks, or two medullary grooves may be formed, or later in growth, a duplication of one or the other end of the germinating zone takes place. If two embryonal areas appear it is possible that two complete individuals, or if the two areas are not entirely separated, united twins will result. Entrance of more than one spermatazoid into the ovum is not the cause, because eggs so impregnated usually die. The etiology of double monsters is unknown, and whether there is a splitting of one primitive streak or the fusion of two primarily formed is unknown. They are classified as follows: First, *terata katadidyma*; is fission from head down, one pelvis, two legs, the trunk being separate. Second, *terata anadidyma*; here splitting is from below upward, two complete bodies and one head. Third, *terata kata anadidyma*; homologous twins, may be attached by the whole dorsum or ventrum or by a very small attachment as the sternum (*sternopagus*), the abdomen, or sacrum (*pyopagus*). Example, the Bohemian sisters, or Ensiform appendix (*ziphogogus*) as the Siamese Twins.

Clinical aspect of monsters; since single monsters are more common than double they are of more interest to the accoucheur and they produce dystocia more frequently, because they are more often developed to maturity and because enlargement of the parts is so often met with. *Hydrocephalus*, *anencephalus*, with broad shoulders, hernias and accumulation of fluid, in the body cavities, are the usual conditions found, but they present simple problems of treatment. Not so with the double monsters, which may give rise to dystocia, dangerous and complicated operations are necessary to effect delivery.

**Diagnosis:** Before labor a monster may be suspected. Hydrocephalus could be diagnosed and an anencephalus if the examiner were on the alert. The X-ray is now available and since recurrence is not rare, a history is of service in the diagnosis.

During labor the possibility of a monstrous formation is to be considered, as it might be embarrassing to deliver a monster by a cesarean section; DeLee says it has happened to clever accoucheurs. An anencephalic monster presenting by the head might be mistaken for placenta praevia, prolapse of the cord, simple face or breech presentation. The association of deformities will aid in diagnosis, for instance, in a breech delivery with a spina bifida one may suspect hydrocephalus, or if the delivered head shows hairlip and delay in delivery of the trunk one may suspect a monster single or double. DeLee states, double monsters have never



been diagnosed before labor. Twins have been suspected. If there is delay in delivery, which is not overcome by the usual manipulations, an examination should be made with the hand. An anesthetic should be given for the sake of deliberation, and in primipara a deep episiotomy is advisable. Such an exploration should determine the enlargement of a part of the foetus, a tumor of the uterus or fetus, a double monster, the extent and location of fusion, number of arms and legs and the movability of one child on another.

I will now give the history of this case:

Father, age 29, occupation book-binder. Past history, usual diseases of childhood, denies all history of venereal diseases. In 1915 he had a severe case of alopecia areata, which still persists and looks suspiciously luetic. Dr. W. H. Bailey, Pathologist to Wesley Hospital, has made a Wasserman and the report is negative.

Mother: Mrs. R. History, multipara, age 27, occupation housewife. Ordinary diseases of childhood, was a strong, healthy girl prior to her marriage, seven years ago. She gave history of abortion at six weeks or two months, then later an abortion at three months, about five years ago. Then delivered a healthy child, full term, three years ago, normal except a naevus vasculosis on the forehead, which was removed six months later by carbon dioxide snow. Last pregnancy beginning May, 1915, seemingly a normal pregnancy until after quickening, then the mother complained that the child never moved like the previous one did. She described it as only a flutter, which made her very uncomfortable and she was unable to be about.

On account of excessive hydramnios, the external anti-partum examination was never a satisfactory one. On February 3rd, 1916, labor began at 3 a. m. At



7 a. m. examination revealed three fingers dilatation, bag of waters intact. 9:30 labor pains violent. Membranes ruptured with the expulsion of a large quantity of amniotic fluid. The mother complained of a peculiar jerking of the child in utero. This occurred again after an interval of probably one minute. Internal examination revealed a face presentation, eyes bulging, low forehead, absence of anterior and posterior fontanelles, head sloped backward with absence of the occiput. The ununited halves of the posterior spine could be felt. The diagnosis of a monstrosity was made. After waiting a short time and no engagement occurred, the gravida was given an anesthetic and a combined podalic version and extraction was performed. The delivery confirmed the diagnosis of a monstrosity of the anencephalus type. See illustrations herewith. The placenta was delivered by Crede's method. The puerpera made an uneventful recovery.



## LARYNGEAL DIPHTHERIA\*

H. M. WILLIAMS, M. D., Wellston, Oklahoma.

As our subject indicates, we will confine our discussion as closely as practicable to that phase of diphtheria known and recognized as the laryngeal type. This form of diphtheria is caused by the same bacillus "Klebs-Loeffler" as the regular form, the main difference being the location or seat of infection. The bacillus in this particular type lodges and finds its growth in the larynx, may extend into the trachea and the bronchi, thus producing a symptomology in many respects different and a condition more difficult to combat.

In this type of diphtheria the larynx is the primary seat of infection in the greater majority of cases, though oft times it may be an extended growth of a neglected case of the regular form producing a typical case of the laryngeal type.

Some writers hold that a membranous laryngitis may be produced by the pus cocci alone, unassociated with the "Klebs-Loeffler" bacillus, but are of the opinion such cases are rare and, in the absence of positive proof, should be regarded as laryngeal diphtheria. That a membranous laryngitis of the streptococcic variety occasionally occurs subsequent to an attack of measles is affirmed. Further, it is an established fact that in many cases of laryngeal diphtheria, that some form of the pus producing cocci are to be found present.

The symptoms of a case of laryngeal diphtheria are so pronounced that a diagnosis to the alert physician is not difficult. It is true foreign bodies lodged in the air passages, or false growths due to the streptococci variety might assimilate similar symptoms, but the infrequency of such a condition existing will be a valuable aid in reaching our conclusions.

At the onset the child will rarely complain of chills, fever and malaise, as in the regular form, but the first symptom noticed is a slight hoarseness, which gradually increases, and takes on a croupous condition. The progress is so gradual that it may continue for twenty-four to seventy-two hours before a physician is summoned. The delay being in a measure due to the mildness of the attack, or the general characteristics of the child. In most cases of this form of diphtheria the parents, at the beginning, think it to be a case of ordinary croup, and the more apt are they to think so if the case should develop in a child subject to croup. The area of infection is not great, therefore the amount of toxins absorbed are slow at first, and rather than having a temperature, the temperature is generally subnormal. The pulse is rapid and compressible. "The laryngismus stridulus" type of breathing once heard is never to be forgotten. A cyanotic condition, dyspnea, the child gasps for breath, wanting to be taken out to an open door or a window, and at times pleads to be taken out into the open air.

Upon examination of the throat, it will usually reveal a congested condition of the tonsils, and mucous membrane of the fauces, with a dark red color, having a superficial gray tinge, but no false membrane.

The constitutional symptoms become more marked, as the disease advances, the pulse will become more rapid, and compressible, the cyanotic condition more marked. The child gradually becomes weaker. A fatal termination in this type of diphtheria is due, usually, to suffocation and not to a general toxæmia. Contrary to diphtheria of the faucial variety, out of a series of one half dozen cases, we have not seen a kidney complication of any note, nor the manifestations of albumen in the urine, where the primary lesion was the larynx, while in those cases that have extended from the fauces to the larynx, trachea and bronchi, as a secondary infection, albumen is usually present, and the case assumes a malignant type, with exaggerated symptoms.

It is generally conceded that diphtheria is a local infection producing constitutional symptoms, rather than a constitutional disease manifesting local symp-

\*Read before the Section of Pediatrics, Oklahoma State Medical Assn., May 10, 1916.



toms. Naturally the greater the area of infection, the greater amount of toxins that will be absorbed into the system through the lymphatic and capillary circulation.

Upon being summoned to a case that presents the above symptoms, it is our rule to assume that we have the presence of the "Klebs-Loeffler" bacillus and administer treatment accordingly. The average practitioner has not the laboratory facilities for making the necessary bacteriological test, nor if he did have, would it be wise to consume the time at the further risk of our patient's life, when he has, as in the majority of cases, been summoned at the advanced stage of the disease. Few, if any, diseases confront the physician that demands more prompt and more radical treatment than the subject under discussion.

The method of treatment usually adhered to by the writer is as follows:

Our practice being largely confined to the rural districts, it is our custom, upon being called to a case presenting the above symptoms, to take with us diphtheria antitoxin. In case the diagnosis is that of laryngeal diphtheria, the average dose of antitoxin is given, 3000 units for a child of two years, increasing and decreasing according to the age, giving the maximum rather than the minimum amount.

Immediately the organs of elimination are looked after. Heart stimulants are usually needed. Expectorants are administered at frequent intervals, to prevent the mucous excretion from lodging in the already obstructed air passages.

The use of astringents to tonsils and mucous membrane of the throat to prevent further thickening of either if possible.

Apply heat both dry and moist to the muscles of the throat from the outside, in order to stimulate circulation to that location.

Give plenty of fresh air. Keep the body and limbs wrapped in a blanket. Diet should consist of liquids. Keeping the patient as quiet as circumstances will permit.

The bowels are opened with a combined dose of calomel and castor oil. The heart action is maintained by use of strychnae. As an expectorant, syrup of squills and spirits of ammonia aromatic given in a vehicle, the former acts as an expectorant and the latter as both a stimulant and dissolves any mucous that might be thrown off by the lungs to obstruct the air passages.

Administer as an astringent to the tonsils and mucous membranes tincture of iron in glycerine, giving us both an astringent and tonic effect.

Milk is the most convenient and practical diet and should be administered at intervals of every three or four hours.

As to the use of vapors under a sheet, I have not found the use of them beneficial or advisable, as the above expectorants will act as a stimulant to the excretion of the mucous surfaces, and nothing more could be expected from the sheet vapor, the use of which is very undesirable to the child, who is exerting every energy in its power to breathe. Why hamper them further?

Diphtheria antitoxin being the remedy to be relied upon, the initiative dose should be repeated at the end of eight hours, from then on give every eight to twelve hours, owing to the severity of the case.

As to intubation and tracheotomy, we have not practiced either, but in the hands of some physicians have proven beneficial.

The amount of antitoxin to be administered in a given case depends largely upon the quantity and virulence of the absorbed toxins. As already stated, the area of infection is much less than in the regular type, the process of absorption in the larynx, trachea, and bronchi is very slow, due to the fewness and smallness of the capillary vessels, while in the throat, due to the lymphatic glands and blood vessels absorption readily takes place.

Rarely in the form under discussion will we find the amount of toxins in the

blood, hence it is not necessary to administer the amount of antitoxin as we would in the more malignant type. It is our opinion, because of the distressed condition of the patient, that possibly larger quantities are administered than is actually necessary in many cases.

There is no definite means by which we may determine the amount to be given. In McKee and Wells recent works on children, they quote the following, Wm. H. Welch:

"Experimental evidence favors the theory that antitoxins act through the agency of living bodies, and probably in the sense that it renders the cells tolerant of the toxin. It is not to be expected, then, that the effects will follow the injection of serum with the same precision and certainty that is shown in chemic reaction, that cells must be in a condition to respond in a proper way. For one reason and another this responsive power may be in an abeyance; it may be weakened by intense or prolonged resistance of the diphtheria poison, by other previous or recurring diseases, by inherited weakness, or often there may be some individual idiosyncrasy which hinders the response of the cells to antitoxin. There is also a possibility that the antitoxin may neutralize the effects of certain toxins and not others in diphtheria."

From the above it will be seen that the amount to be used will depend in a large measure as to the reaction obtained.

It is further stated: "Antitoxin serum exerts no bactericidal effect upon the diphtheria bacilli, though when administered in sufficient quantity early in the disease, it arrests the spread of the disease, which is caused by the bacilli." Our observation is when persistently used the bacilli disappear from the local site of infection much sooner than in cases treated without it.

Of the one-half dozen cases that came under our observation during the past fifteen months, three were well advanced, all were given the above treatment in addition to the antitoxin. The amount given in each case was as follows:

The first child, two years of age, at the end of forty-eight hours, stenosis yielded, after the administration of 12000 units of antitoxin given in four doses.

The second child, five years old, yielded at the end of seventy-two hours, after the administration of 19000 units given in five doses.

The third, a boy of seven years, was relieved after the administration of 14000 units given in four-doses administered at the usual intervals.

It is reasonable to conclude that had all of the above cases come under the observation of a physician at the appearance of the first symptom, each would have yielded after the administration of the initiative dose.

The last case that came under our observation was a colored child seven years of age who but a few hours previous developed all the characteristic symptoms of laryngeal diphtheria, recovered from a single dose of three thousand units.

It is the opinion of the writer that the intravenous administration of antitoxin in advanced cases of laryngeal diphtheria would be very beneficial, but owing to the smallness of the blood vessels and the distressed condition of the child, we have not practiced this method.

As stated above, bacteriological findings show in many of these cases a presence of the various pus producing cocci. No doubt but there are many instances in which the administration of some form of the mixed bacterins in conjunction with the diphtheria antitoxins might prove beneficial. Some authors advocate the administration of antistreptococci serum in conjunction with diphtheria antitoxin.

Our conclusion is, after having observed a number of cases of laryngeal diphtheria, that the physician must constantly be in touch with this patient from the first visit until stenosis is relieved, that the treatment must be heroic from the onset, that diphtheria antitoxin is both essential and beneficial, as a means of

relief, and when in doubt as to diagnosis, do not wait for further developments. Regardless of how mild the case may be, upon your first visit to the patient, administer antitoxin, as no harmful results will follow its use; if we err it is much better to err on the side of safety.

### GONORRHEAL OPHTHALMIA\*

R. L. MITCHELL, M. D., Vinita, Oklahoma.

In my paper I shall not attempt to discuss the subject from the view point of a specialist, but rather as a physician in a general practice and especially in his relations to the treatment of diseases of children. I shall bring to your attention no new thoughts on this well (but not too well) known subject. If I succeed in causing you to review with me, and again realize of its importance in relation to diseases, then I shall have ample reason to feel repaid for my effort.

Before the year of 1879 little was known of gonorrheal ophthalmia, the disease was prevalent, its real cause unknown. It was then Neisser succeeded in discovering the micro-organism which medical science today knows as "Gonococcus of Neisser."

Its preference seems to be urethra in the male, urethra and vagina in the female. Should this particular micro-organism reach the conjunctiva by some accidental means, it (there depending on incubation period, greater in the infant than in the adult, later being from twelve to forty-eight hours, while former is from forty-eight to seventy-two hours) sets up an active and destructive inflammation which may follow along the lachrymal canal into the nose and mouth.

Your attention then is directed by the present to this form of conjunctivitis, and I can not too often urge upon you the importance of being able to recognize it at the first appearance and administering the proper treatment before that time worn saying, "Too late," has arrived.

It is true the specialist can often cope with the above conditions better than we, but cases cannot always be referred to him, hence the necessity of being able to recognize and treat the condition as met in general practice. If we are to be known as our "brothers keeper," we should by no means allow our minds to forget the importance of gonorrheal ophthalmia. If there is one disease the general practitioner should recognize, it is this, whether he wishes to treat it or not.

You have but to let your memory run back a few days, weeks or years, perhaps to some eye clinic or school for the blind, when you at once recall the case or cases where sight has been lost, due to the infection of *Gonococcus Neisser*.

*A blind mistake*, due to the failure of some one, in not knowing and treating the condition as it then existed. In our early teaching we were told: "You are the possessors of five senses, seeing, hearing, feeling, tasting and smelling." I believe them to be enumerated according to their value; if this is true, then does it not behoove us to reacquaint ourselves with gonorrheal ophthalmia, and in so doing we may be enabled in the future to preserve the sight.

It is said twenty-four per cent of inmates of schools for blind of Europe is due to loss of sight from this one disease. Since the adoption of adequate treatment by ophthalmologists and physicians, the per cent has been reduced from seven and five-tenths to five-tenths, showing conclusively that purulent conjunctivitis is a preventable disease. Some states have recognized it as such and have made it an offense if preventive treatment is not applied at time of birth. The Certificate of Birth, Oklahoma State Board of Health, asks the question: "Did you administer in the eyes, two per cent solution argyrol?" This I do not think strong enough to have any virtue as a preventive.

\*Read in Pediatric Section, Oklahoma State Medical Assn., May 10, 1916.



Not many weeks ago, the *Journal* of the American Medical Association made mention of a society being organized, I believe in Chicago, whose motto is: "Save the Babies' Sight." This it seems is a laudable move and from it I infer, blindness is preventable, when due to infection of *Gonococcus Neisser*. I might say Crede's method of treatment seldom fails, hence its importance.

Gonorrhoeal ophthalmia may then be defined to be a purulent conjunctivitis due to the infection of *Gonococcus* of *Neisser*. As a rule the prognosis in infants is less grave than that in the adult, due no doubt, at birth, the infection occurring from latent gonorrhoea, while type in the adult is more often the acute form when infective power is greatest, and too the infant's resistive power seems to be the greater. The disease runs a tedious course and when promptly and carefully treated is seldom well under four to six weeks.

A typical case presents swelling of lids. In infants, more often both eyes involved; in adults often only one eye. There is a hypersecretion of mucous or serum, there may be hemorrhage from eye lid, injection of conjunctive. The greatest damage to be feared in each form of the disease, is necrosis of cornea,—nutrition being interfered with through the activity of inflammation.

A positive diagnosis can only be made by the use of the microscope; unfortunately this can not always be had; if the case looks the least bit suspicious, the proper treatment should at once be given, prevention is far better than cure.

I shall try to outline the treatment which has done so much toward lessening blindness caused from this infection.

Prophylaxis we know is first. In 1881, two years after the micro-organism's discovery, Crede recommended that two per cent solution nitrate of silver be dropped into each eye; this by all means should be done when there is suspicion of the infection.

In obstetrical practice the attendant should be *surgeonically clean*, also everything he sees fit to use. Carelessness defines the physician's mistake more often than ignorance, an error which is not excusable.

I recall a case of blindness which presented itself in our clinic at school some years ago. You will pardon me for alluding to it. The story briefly told is: "I am a mid-wife by trade, not many days after leaving my last case, my eyes, one first affected, later the other, pain and swelling were present, this condition grew worse. I consulted a physician, still there was no improvement. My sight is lost and now I am here to see what you can do." No doubt the physician mentioned recognized the condition but was unable to render benefit. This case mentioned, judging from the history given and the condition of eyes, it was easy to make a diagnosis. She was told her condition was hopeless, that she was doomed to be blind the rest of her life.

This, gentlemen, is one among the many which has happened throughout our country due entirely to carelessness or ignorance.

Treatment: It is most simple but hard to carry out. This should be begun as soon as the first symptoms present themselves. If one eye is involved, the sound eye should be protected by placing watch glass over eye and sealing with adhesive; this should remain until infected eye is well. It is necessary to remove glass for cleaning eye; when done, the same should be reapplied.

Everything coming in contact with eye, all cotton gauze, etc., used in dressing, should be burned. This insures against infection in others.

The essential thing is to keep eyes free from purulent discharge by use of warm water or, better still, a saturated solution of boracic acid every half hour if necessary. The lids should be everted and a two per cent nitrate of silver solution applied, the excess be removed with tepid water.

Some ophthalmologists now prefer protargol which may be used 4 per cent once daily, weaker being used twice daily, 10 or 20 per cent; argyrol may be used still stronger and applied more often, it being less irritating.

Cold compresses are beneficial in allaying pain and inflammation. If swelling is great it may be necessary to slit the outer canthus. Should the cornea be involved it is well to dilate the pupil. Atropin grains, 1-10 to one ounce, relieves tension, which may prevent perforation or anterior staphyloma.

In conclusion, I wish to say that in gonorrheal ophthalmia we have a disease in which the innocent often pay the penalty for the crime committed by another.

It is our mission as physicians to render them all aid possible, and at the same time, if we can benefit those who by their mistakes become infected, we should be ready and willing to obey that divine command, "*Let There Be Light.*"

---

## A CONDENSED REPORT OF THE AMERICAN PROCTOLOGIC SOCIETY, DETROIT, 1916.

By J. M. COOPER, M. D., Oklahoma City

The retiring president, Dr. T. Crittenden Hill, Boston, Mass., in his address "Why Proctology Has Been Made a Specialty" calls attention to the inadequate treatment of rectal diseases at the hands of the general surgeon. He says they have never taken the pains to learn the underlying principles of treating rectal diseases. He urges that proctologists be appointed on staff of all general hospitals. He regrets that the undergraduate does not have the chance to acquire reasonable proficiency in treating rectal diseases.

Dr. W. H. Stauffer, St. Louis, reviews 1500 rectal cases which were operated, calling attention to the fact that 400 of these had been operated before by other surgeons. He says failure to get results were due to two reasons: First, not selecting the operation indicated by the pathology; second, to improper post-operative treatment.

Dr. G. S. Hanes, Louisville, Ky., states that active tubercular ulceration of the rectum or colon always produces a decided increase in temperature and pulse rate. Tubercular abscesses often appear about the rectum when patients otherwise show no evidence of tuberculosis. Tubercular abscesses and fistulae have a great tendency to undermine the skin.

The internal fistulous opening is rarely found in the rectal wall except where some other pathological condition exists, thereby lessening the resistance of rectal wall. The internal opening is usually found in the anal canal.

Pruritis ani is a local infection and should be treated with an autogenous vaccine made from the bacteria found at the anal margin.

Dr. J. R. Pennington, Chicago, made a preliminary report of his investigation concerning focal infection in the anorectal region. Streptococci, staphylococci, colon bacilli, and other bacteria were found in the crypts of Morgagni and other diverticuli or pockets of the anorectal region.

Dr. Rollin H. Barnes, St. Louis, recommends palliative treatment of fissure in ano by correcting the diet with reference to the excess of carbohydrates and fats in the diet, and the placing of the patient on a proteid diet for a time. When operation is necessary, he believes that the object should be drainage rather than paralyzing the muscular fibers.

Dr. Frank C. Yeomans, New York, thinks the tumors found in the colon and rectum, as the solitary polyp, multiple polyposis, multiple adenomata, and villous tumors are inflammatory in character and further states such tumors often become malignant. Their early and radical removal is recommended.



Dr. Dwight H. Murray, Syracuse, N. Y., reports that in 123 cases of pruritis ani, the streptococcus fecalis was proven to be the etiology in 95 per cent of the cases. He recommends treating pruritis ani with an autogenous vaccine made from the streptococcus fecalis of over 1000 million dead germs to the cc. Dr. Murray says that some cases are complicated with a staphylococcus infection, and the autogenous vaccine of this germ should be used in addition to the streptococcus vaccine. Dr. Murray is more firmly convinced than before, that operations for the cure of pruritis ani, such as Ball's operation and its modifications, are absolutely contraindicated and should never be performed.

---

Dr. Lewis J. Krause, Cincinnati, says that spasmodic stricture is not a disease but a symptom of a more serious condition of the rectum. He also states that spasmodic stricture is often the forerunner of the fibrous benign stricture of the rectum.

---

Dr. W. H. Axtell, Bellingham, Wash., in speaking of acute angulation and flexure of the sigmoid as a causative factor in epilepsy, says the essential failure of treatment of these conditions lies in the fact that so few recognize the true condition, and, if the condition is recognized, there is not sufficient persistence in relieving the condition, or an ignorance as to the amount of the material the colon holds and as to when it is well emptied; thus they resort to mutilating surgery without getting results commensurate to the gravity of the surgery resorted to. Keeping the colon empty is the main object in the treatment administered by Dr. Axtell.

---

Dr. Donly C. Hawley, Burlington, Vt., prefers the left lateral prone position to the knee chest position in his sigmoidoscopic work.

---

Officers elected for ensuing year: President, Alfred J. Zobel, M. D., San Francisco, Cal.; Vice President, Granville S. Hanes, M. D., Louisville, Ky.; Secretary-Treasurer, Collier F. Martin, M. D., Philadelphia, Pa. The 1917 meeting will be held in New York City.

---

### HEMOLYTIC JAUNDICE.

G. A. Friedman and Elihu Katz, New York (*Journal A. M. A.*, Oct. 28, 1916), report a case of acquired hemolytic jaundice relieved by splenectomy, which is the first, or one of the first, cases of this kind reported in American literature. In their comment on the history, they review the facts regarding hemolytic jaundice and its pathologic causes. The spleen has been classed among the ductless glands with one of its special functions, hemolysis. Hyperactivity of splenic function due to some unknown pathologic condition leads to an excessively marked hemolytic action called by Eppinger "hypersplenism." The hemolysis disappears or is strikingly altered by removal of the spleen, and some experimenters claim to have obtained an extract from the organ with hemolytic properties. The evidence for this is, however, meager. Another possible explanation of the condition is found in the association of unsaturated fatty acids and hemolysis. In splenectomy these fatty acids are reduced. The authors also describe the special features of the blood in hemolytic icterus, the increased fragility of the red blood corpuscles, which, however, may be continued even after splenectomy in some cases. The phenomenon of auto-agglutination has also been described in the acquired type, but it was absent in the case reported. The anemia in the hemolytic icterus is not as a rule severe, and is the direct result of the destruction of the blood. The splenomagaly is one of the principal characteristics, and the authors believe that splenectomy gives the best results in treatment.

## PROCEEDINGS OF ST. ANTHONY'S CLINICAL SOCIETY

DR. D. D. McHENRY, Pres.

DR. L. J. MOORMAN, Secy.

LABORATORY DIAGNOSTIC METHODS IN POLIOMYELITIS  
WITH REPORT OF THREE CASES.\*

By O. J. WALKER, B. S., M. D., Oklahoma City

Director, the Wm. W. Bierce Research Laboratory of St. Anthony's Hospital

On account of the recent epidemic of antero-polio-myelitis in New York City and adjacent community the three sporadic cases occurring in our city recently have attracted more than ordinary attention and may furnish some information of interest.

In the diagnosis of antero-polio-myelitis the Laboratory is able to furnish valuable corroborative evidence only, but unfortunately no absolutely diagnostic findings. A brief review of the clinical laboratory findings by various workers will not be amiss here.

A very interesting test from a historical as well as a diagnostic standpoint is the inoculation of monkeys by means of washings from the respiratory and alimentary mucous membranes. This test, first successfully performed by Kling, Pettersson and Wernstedt in 1911, demonstrated the presence of the infective virus in the nose and throat of patients sick with the disease and has since been used repeatedly for diagnostic purposes.

A second diagnostic laboratory method is the so-called neutralization test. Here the serum from the suspected case in the stage of recovery is mixed with a known fatal dose of an active virus. These are incubated and later injected intracerebrally into monkeys. Failure of the disease to develop indicates that the virus has been neutralized. This test however is not conclusive, for normal serums have sometimes successfully neutralized the virus. It is, however, quite obvious that these two laboratory methods requiring the use of monkeys are both too complicated and costly for ordinary diagnostic use.

Experimental animals suitable for diagnostic inoculation in poliomyelitis are few—being limited to apes, monkeys and rabbits. Monkeys and apes are ideal in their reactions but are too expensive and difficult to obtain, to be practical. Rabbits seem to possess the property of susceptibility to poliomyelitis in varying degrees, and in consequence of this inconstant reaction to the infection, are unsuitable for diagnostic purposes.

The spinal fluid is our most trustworthy and valuable aid in the early diagnosis of poliomyelitis and we should insist on immediate withdrawal of this fluid for purposes of examination in suspected cases. In the early stages the spinal fluid is increased in amount, but does not spurt as a rule as in tubercular meningitis. In character it is clear or slightly turbid (described by some as opalescent). It often forms a good fibrin reticulum on standing. There is slight to moderate increase in albumen and globulin in about 50 per cent of early cases. Fehling's is promptly reduced. Cell counts over 1000 are rare and counts between 100 and 200 are most common. The lymphocytes appear as high as 80 per cent and some consider this characteristic of poliomyelitic fluids.

Three rare types of cerebrospinal fluid have been noted. First—a slightly cloudy fluid, showing a polymorphonucleosis as high as 80-90 per cent. Second—a hemorrhagic fluid with the blood cells evenly distributed throughout. If first portion of fluid is caught in a test tube and a later portion of fluid caught in a separate tube both will be equally colored showing blood is not due to puncture. Third—a clear yellowish fluid which coagulates spontaneously illustrating the syndrome of Froin.

In the first 24 to 48 hours from its onset poliomyelitis must be differentiated

\*From the Wm. W. Bierce Research Laboratory of St. Anthony's Hospital, Oklahoma City.

from the early stages of epidemic meningitis, or mild purulent meningitis, and also from a meningismus accompanying pneumonia or other infection. The clinical pictures presented by these diseases are quite similar and it is in distinguishing between them that the examination of the spinal fluid affords valuable information.

The spinal fluid from early cases of purulent meningitis show a varying degree of cloudiness, larger amounts of albumin and globulin, and a poorer reduction of Fehlings than occurs in poliomyelitis. The cell count in purulent meningitis is higher than in infantile paralysis, and polymorphonuclears are present in 80-90 per cent. In purulent meningitis the causative organism can be found in the fluid except in the mildest cases.

In meningismus accompanying an acute infection the fluid is usually found increased in amount but normal in character. In tubercular meningitis, however, we usually have a clear fluid, increased albumen, globulin and cell count greater than in poliomyelitis. Reduction of Fehlings is usually not so prompt as in poliomyelitis though this is not an infallible rule as some early cases of tubercular meningitis reduce Fehlings very promptly. In both conditions there is an increase in the lymphocytic elements. The tubercle bacilli may be found in the fluid in about 90 per cent of the cases. Noble's ninhydrin reaction, positive in tubercular meningitis may also aid in the differential diagnosis together with the acute onset in anteriopoliomyelitis as compared with chronicity in tubercular meningitis. In cases seen a week or more after onset it is almost impossible to differentiate the spinal fluid of poliomyelitis from tubercular meningitis except by animal inoculation.

The spinal fluid in cerebro spinal syphilis is identical with that in poliomyelitis, but here we have the Wassermann reaction to aid us in the differential diagnosis.

The blood picture in anteriopoliomyelitis is not characteristic of this disease and is of value only as an indication of the presence of an acute infection. The red cell count is normal while the leucocytes are usually moderately increased with apolymorphonucleosis. S. R. Klein<sup>1</sup> in a report of 400 cases treated at the Willard Parker Hospital, N. Y., called attention to the fact that in nearly every case the urine contained albumin in moderate amount. I have not seen mention of this fact in any other reports and the urine in the three cases that have lately come under our care was negative throughout. Klein also noted an increased urea content in the urine, but this is present in any inflammatory condition.

A still unpublished report by P. C. Jeans,<sup>2</sup> St. Louis, and Meredith R. Johnston,<sup>2</sup> New York, of 105 cases examined in preparalytic, paralytic and abortive stages by the Lange colloidal gold test, shows a remarkable constancy of positive reaction in all three stages. This test, it is claimed by them is a valuable aid in the diagnosis of abortive and preparalytic cases and is even useful in the differential diagnosis between anterio-poliomyelitis and tubercular meningitis. However, further corroborative work along this line is necessary to establish the true value of the test in poliomyelitis.

A brief report of our three cases, which are really typical from the laboratory standpoint will serve to illustrate these findings in general.

#### Leukocytes

Case No. 1646			Case No. 1655			Case No. 1700		
Day of Dis.			Day of Dis.			Day of Dis.		
2nd.	Day	9,800	1st.	Day	11,400	*6th.	Day	22,500
3rd.	"	*14,500	2nd.	"	*17,960	7th.	"	19,000
4th.	"	10,700	3rd.	"	7,900			
5th.	"	9,500			6,075			
7th.	"	7,900						

\*Day following intramuscular injection of convalescent serum.



## Spinal Fluid

Case	Cell Count	Differential		Globulin	Albumen	Fehlings	Color	Tension
		Polys.	Lympho.					
1655	133	44	56	Neg.	Lt. Cl'd	Neg.	Opalescent	Increase.
1700	1st. Dy. 450	25	75	Pos.	Neg.	Neg.	Turbid	"
	2nd. " 106	30	70	Pos.	Neg.	Sl. reduction.	"	Slight increase

On the days following the intra muscular injection of convalescent serum a marked rise in the white cell count was noted in all three cases which gradually subsided in a few days as shown in two of the cases.

In case 1700 there was a marked change in the number of cells and tension of the spinal fluid on the 2nd day and the question arose whether it was the convalescent serum administered intramuscularly the day before, or whether the reduction in the cell count was due simply to the drainage afforded by the withdrawal of 25 c.c. of the turbid fluid on the previous day.

This result is similar to that obtained by C. W. Wells<sup>3</sup> of Chicago in a series of 15 cases treated by convalescent serum. He administered the serum intramuscularly, intravenously and intraspinally. The cell count in the spinal fluid usually increased following first intraspinal injection, then gradually decreased, disappearing entirely following the 3rd or 4th injection. Wells reported best results with intravenous, or intravenous plus intraspinal administration and advised repeating dose of 10 to 50 c.c. every day for 3 or 4 doses. He also claimed that convalescent serum from persons who had the disease 32 and 39 years ago was not as active therapeutically as was those of more recent attacks—two weeks to 9 years.

1. S. R. Klein, M. D., P. H. D., *New York Medical Journal*, Vol. CIV, No. 5.
2. P. C. Jeans, St. Louis, and Meridith R. Johnston, New York.
3. C. W. Wells, Jr., A. M. A. Vol. LXVII, No. 17.

## IODID MEDICATION BY THE MOUTH.

Studies of the spinal fluid during iodid medication by mouth are reported by J. H. Catton, San Francisco (*Journal A. M. A.*, Nov. 4, 1916), made in order to determine the presence of organic or inorganic compounds of iodid. Study 1 includes observations on five patients in the San Francisco Hospital on routine iodid medication, and Study 2, observations on one person receiving very large doses of iodid. Two specimens of spinal fluid were used in each case. The test was made as follows: "A portion of spinal fluid was added to some dry sodium carbonate and the mass powdered; the latter was added slowly to a quietly fusing mixture of potassium nitrate and sodium carbonate; the entire mass was allowed to cool, was removed from the crucible and dissolved in distilled water; to a portion of the latter was added some starch paste, and then nitric acid containing a little nitrous acid, drop by drop. Controls containing minute traces of iodine gave a blue color, but no reaction occurred with any of the fluids examined." In all the series of cases examined by the above and other tests, regardless of the amount of iodine administered by mouth, no iodine or compounds of iodine were found in the spinal fluid. Catton concludes that either iodine compounds do not pass through the choroid plexus in any measurable amount or such iodine as does reach the spinal fluid is very rapidly fixed in the tissues.



**JOURNAL OF THE OKLAHOMA STATE MEDICAL ASSOCIATION**

VOLUME X

JANUARY, 1917

NUMBER 1

PUBLISHED MONTHLY AT MUSKOGEE, OKLA., UNDER DIRECTION OF THE COUNCIL

DR. CLAUDE A. THOMPSON, EDITOR-IN-CHIEF

ENTERED AT THE POSTOFFICE AT MUSKOGEE, OKLAHOMA AS SECOND CLASS MAIL MATTER, JULY 26, 1912

THIS IS THE OFFICIAL JOURNAL OF THE OKLAHOMA STATE MEDICAL ASSOCIATION. ALL COMMUNICATIONS SHOULD BE ADDRESSED TO THE JOURNAL OF THE OKLAHOMA STATE MEDICAL ASSOCIATION, BARNES BUILDING, MUSKOGEE, OKLAHOMA.

The editorial department is not responsible for the opinions expressed in the original articles of contributors.

Reprints of original articles will be supplied at actual cost, provided request for them is attached to manuscript or made in sufficient time before publication.

Articles sent this Journal for publication and all those read at the annual meetings of the State Association are the sole property of this Journal. The Journal relies on each individual contributor's strict adherence to this well-known rule of medical journalism. In the event an article sent this Journal for publication is published before appearance in the Journal, the manuscript will be returned to the writer.

Failure to receive the Journal should call for immediate notification of the editor, 507 Barnes Building, Muskogee, Okla.

Local news of possible interest to the medical profession, notes on removals, changes in address, deaths and weddings will be gratefully received.

Advertising of articles, drugs or compounds not approved by the Council on Pharmacy of the A. M. A. will not be accepted.

Advertising rates will be supplied on application. It is suggested that wherever possible members of the State Association should patronize our advertisers in preference to others as a matter of fair reciprocity.

**EDITORIAL****A STATE HOSPITAL PROPOSED FOR THE UNIVERSITY.**

Among the important items Governor Williams will suggest to the Legislature is an appropriation of \$200,000 for the purpose of building a state hospital to be controlled by the Medical Department of the State University. It is said that a part of the fund will be used for building, the remainder for equipment. Incidental to the appropriation is contingent an offer of Oklahoma City to deed to the University the University Emergency Hospital, a modern structure already in occupancy and use.

Governor Williams takes the view, and in that he has the hearty agreement of all thinking persons, that an important part of a university is its ability to train people in all proper branches of endeavor, that medical education is one of the important functions of the state and its university, that if we are to have a medical department it should be the best our energy, brains and money can create, and that we should not take a secondary place in medical education, any more than in legal, agricultural or other education.

We should not forget the plight of the graduates of our school in certain events or what the State owes the graduate in the way of standard, efficient education and training.

The grading of medical schools has been a slow and laborious process, and has finally come to the point that the term "Class A, B," etc., is a positive fixing of class, observed and respected by practically all the State Boards of Examiners of the Union, in fact the class is nearly definitely recognized and specifically mentioned in many state laws, if not mentioned in name, other description is given, which means the same.

Oklahoma has long been assigned to "Class B," an assignment not relished by high-spirited, finely equipped members of our profession and the proposal to build a state hospital for the school is a definite move to get out of that class. One of the requirements for a college to enter class "A" is that the school should directly control and operate a hospital of not less than one hundred beds. If this appropria-

tion passes, our University will have such a hospital, and in that achievement will have overcome the greatest obstacle, in fact the only real one left to meet.

It should be understood that this proposed hospital will not be for the benefit of any particular locality, but for the good of all the people of the State. As has been aptly pointed out by Governor Williams, it will be an important investment—an investment that will pay priceless dividends through the preservation of the health of our citizenship; through the development and the practical application of means looking to the prevention of disease, and through the tremendous conservation of energy and of life itself by taking care of our indigent sick.

Oklahoma City has a number of hospitals, with great capacity, equipment and ability, but the institutions are not heavily endowed and are in the creative state more or less. The City of Oklahoma itself, willing and ambitious to excel in all things, has a great bonded indebtedness to care for; necessary extensions in all directions must be made, so far as their local improvements call for, and looking at it from that standpoint the people should hardly expect them to carry all the burden of maintenance of an institution which will be maintained for the double purpose of caring for the needy poor who will be referred to it for treatment from any section of the state, and at the same time maintained as a center of constantly growing worth and necessity for the higher medical education of our youth.

The clinical advantages of such an institution to our student body cannot be overestimated, on the other hand the very great advantage accruing to our indigent and worthy sick cannot be estimated. As the matter now stands, they are treated by every system imaginable, by the competent and incompetent, mostly the latter.

The medical profession should know that Oklahoma appropriates, compared to other states, a very small sum of money per capita for support of education. We have lately had the enviable distinction of being pointed out as the worst example of a state failing to give her university the support she deserved—in the comparative lists we stand at the very bottom. With this we should not forget that of the sums appropriated the lion's share goes to work along other lines than medical education.

We cannot conceive of a more favorable time for the advancement of health conditions than that immediately before us. The state administration is unequivocally committed to it, and considers the establishment of a strong medical department of the State University the first fundamental step in that direction. Would the people—not to say the medical profession—of Michigan be willing to give up Ann Arbor? Would Massachusetts do away with Harvard? Would the people of Maryland be willing to see Johns Hopkins destroyed? At this moment we have the opportunity to lay the foundation of an institution such as these. We have but to stretch forth our hands and grasp it. Up, therefore, each one, and do his whole duty in this undertaking which means much for the future weal of our commonwealth.

---

### DOCTOR, HELP YOUR SECRETARY

All membership automatically expires December 31st. Do not wait for your county secretary to look you up—mail him a check today—and thereby take the effort necessary for him to see you off his hands and save his energy for something more worth his while than making a collecting agent of himself.

## CURRENT MEDICAL LITERATURE

CONDUCTED BY

DRS. L. F. WATSON AND L. J. MOORMAN, OKLAHOMA CITY.  
AND FRED J. WILKEMEYER, MUSKOGEE

### SUSCEPTIBILITY OF MAN TO FOREIGN PROTEINS.

(W. T. Longcope, *American Journal of Medical Sciences*, November, 1916.)

After reviewing the history of this subject, beginning with the observations of Blakely in 1873, on the effect of pollens upon the nasal mucous membrane, conjunctiva and scarified skin, he gives a most interesting and comprehensive report of recent studies along this line, including the results of his own observations. It is most interesting to see, in following this work with Longcope, how the searchlight of science has removed from the realm of mystery many of the conditions which were breaking the back of the term idiosyncrasy.

Today we have a better understanding of the family or individual susceptibility to asthma. We are no longer at a loss to explain the violent gastro-intestinal disturbances in certain individuals following the ingestion of particular food products, as eggs, milk, meats, shell fish and certain fruits and vegetables. In other words, the child who cannot take eggs or cows milk is suffering from a sensitization to these foods.

We are beginning to understand the various skin eruptions dependent upon contact with foreign proteins; also the few instances of hypersensitiveness to the sting of insects.

Interesting reference is made to drug susceptibilities, especially the reactions to iodine and arsenic compounds. He refers to Swift's experiments with iodids and salvarsan leading to the belief that the anaphylactic-like symptoms which sometimes develop, are due to a combination of the drug with the patients serum resulting in a new protein compound to which he may be actively sensitive.

He makes clear the distinction between artificial sensitization and spontaneous sensitization, the latter existing without the known introduction into the system of foreign protein. The sudden death following the first dose of antitoxin is given as an example of the latter.

Longcope says: "Patients can thus be roughly classified as those who react to the sera of animals, those who react to eggs or the sera of fowls, those who react to the extract of shell fish, and those who react to the protein of plants."

The following are suggested as possible paths for spontaneous sensitization: Wounds of skin and mucous membrane; also unbroken mucous membrane and the transmission from mother to offspring either directly as a true inheritance, or by passive transference of the immune bodies by way of blood or milk.

Attention is called to the fact that normal individuals may become ill with symptoms which resemble anaphylactic shock, from the absorption of poisonous products which may through various means be split off from the protein molecule, and that such cases must be differentiated from true anaphylaxis due to spontaneous sensitization.

The latter part of this paper is devoted to a discussion of allergy or altered susceptibility to bacterial proteins, as manifested by general reactions in the course of artificial immunization and the various diagnostic skin reactions. While the analogy is very close, it is suggested that much experimental work is necessary to establish the identity of allergy and anaphylaxis.

L. J. Moorman.

### MORE RADICAL TREATMENT OF DUODENAL AND GASTRIC ULCER.

Deaver, John B., Philadelphia, Pa., *Annals of Surgery*, September, 1916, states it is now known that duodenal ulcer is more frequent than gastric ulcer. Duodenal ulcer is most often located upon the anterior and lateral wall of the first portion of the duodenum. The next most common site is the posterior wall of this portion of the intestine, and the least common site the inner pancreatic wall of the second portion of the duodenum.

Any ulcer that has not gone deep enough into the mucosa to cause hemorrhage, that has not obstructed the pylorus, or remained chronic long enough to be indurated, can only be demonstrated with certainty by opening the viscus to inspection; this I have done a number of times.

In my opinion, as well as in the opinion of others, posterior gastro-enterostomy does the greatest good when the pylorus is obstructed. In ulcers located other than at the pylorus, this operation does but little if any good; and, if any, only by allowing enough bile and pancreatic juice to enter the stomach, thus producing a neutralizing effect upon the hydrochloric acid. That this operation accomplishes any good by drainage alone, I think is doubtful. To repeat, where this operation accomplishes most good is when there is pyloric obstruction and when the ulcer has been excised.

When excision of the ulcer has not materially interfered with the mechanics of the stomach, with the exception of the pyloric ulcer, posterior gastro-enterostomy should not be done. I never make a posterior gastro-enterostomy in central resection of the stomach, for example.

To summarize, I have come to the conclusion that all ulcers of the duodenum or stomach are best treated by excision.



In the presence of a strong clinical probability of gastric ulcer supported by positive X-ray evidence or doubtful findings to palpation and inspection I do not hesitate to perform gastrotomy in order to settle the matter by inspection of the mucosa.

In the individual case the advisability of excision depends upon the local condition. No ulcer should be excised when subsequent closure and anastomosis present too great operative hazards. It is in such cases that operations which depend upon drainage and alteration of gastric chemistry have their field.

L. F. Watson.

#### THE PATHOLOGIC CHANGES IN THE SYMPATHETIC SYSTEM IN GOITER.

Wilson, Louis B., of Rochester, Minn., in the *American Journal of The Medical Sciences*, December, 1916, states the amount and character of the pathologic changes in the sympathetic ganglia removed at operation or at autopsy from patients with exophthalmic goiter have been studied by other observers, meagerly and rarely by modern methods. So far as the findings have been positive, they have shown that in exophthalmic goiter the cells of the sympathetic ganglia exhibit various stages of degeneration. The paucity and incompleteness of the reported observations, however, together with Cannon's recent experimental production of some of the symptoms of exophthalmic goiter in cats by constant stimulation of the thyroid through the sympathetic system, have warranted a more careful study of the material accumulating in the Mayo Clinic.

Thus it will be seen that roughly the degree of hyperpigmentation, the amount of granular degeneration, the atrophy and the reduction in the number of cells was in direct relation to the continuation and subsequent remission of the symptoms of hyperthyroidism.

Though the present number of cases is too small from which to draw positive conclusions, the observations so far seem to indicate that early in acute hyperplastic toxic goiter there is present in the superior cervical, and probably also in some degree in the other sympathetic ganglia, a process which is causing active stimulation, overfunction, and progressive stages of degeneration in the ganglionic cells. As the symptoms of exophthalmic goiter regress, evidence is found in the ganglia of the cessation of this degenerative process in the ganglionic cells not previously changed past recovery. After the acute toxic symptoms have entirely ceased for years, there remains little evidence of the destroyed ganglionic cells, most of the fatty pigmentary remains of the cells apparently having been absorbed.

Thus it is suggested that neither advanced age, chronic wasting disease, nor chronic inflammatory processes necessarily cause degenerative changes in the sympathetic ganglia resembling those in exophthalmic goiter.

The question is suggested whether the involvement of the superior and middle cervical sympathetic ganglia in exophthalmic goiter is but a part of a general metabolic disturbance evidenced by similar changes in the sympathetic ganglia elsewhere in the body, or whether it is confined to the cervical sympathetic ganglia alone. In only four cases in which the cervical sympathetic ganglia were shown to be involved have we been able to study the ganglia from other portions of the body. In none of these was there positive evidence of involvement other than hyperpigmentation.

L. F. Watson.

#### PRIMARY TREATMENT OF WOUNDS IN CIVIL PRACTICE.

Porter, Miles F., in *Surgery, Gynecology and Obstetrics* for August, 1916, states that belief in the old dictum that "Nature is a good physician but a poor surgeon" has done more harm than good. The fact is that she does fairly well in both branches of practice provided she receives intelligent aid rather than pernicious interference. The primary dressing should be the final one in many cases, and in the vast majority of cases it should not be changed until granulation is well established. To change the dressing on a wound unnecessarily is a surgical sin.

Generally speaking one should refrain from using strong antiseptic lotions and from vigorous attempts at the mechanical cleansing of wounds.

The "thorough use of the curette" for the removal of foreign particles and rough and prolonged search for foreign bodies is unsurgical and unwarranted. The surface of a wound is best cleansed of foreign particles by a stream of sterile water or mild antiseptic solution and the use of dry gauze wipes, supplemented when necessary by the use of forceps.

The temptation is great to readjust structures as nearly to the normal as possible and fix them with sutures, wires, nails, plates, etc. That this, our zealotry, has caused the loss of limbs and lives that might have been saved by a less strenuous but more judicious primary dressing is beyond question.

One should be extremely cautious about removing bits of tissue which seem hurt beyond recovery, and this caution should be emphasized in dealing with wounds of the hands and fingers. The objection to this "trimming" process is that it opens new atriæ for infection, causes unnecessary sacrifice of tissue, increases the bleeding, and adds to the time of anaesthesia. The surgeon will do this "trimming" job more expeditiously than Nature, but Nature will do it much more economically and safely.

As a rule dry dressings are preferred. Raw surfaces should be covered by narrow strips of protective to prevent sticking of the dressing and the consequent disturbance of the granulations when the dressing is changed. A non-odorous, non-irritating antiseptic powder used freely in lacerated wounds is advantageous.

L. F. Watson



### A STUDY OF THE MENOPAUSE WITH SPECIAL REFERENCE TO ITS VASOMOTOR DISTURBANCES.

Culbertson, Carey, Chicago, in *Surgery, Gynecology and Obstetrics*, December, 1916, states that from this study we may conclude that:

1. The menopause is a functional derangement on the part of various glands of the endocrine system subsequent to the cessation of the ovarian secretion.
2. On this basis may be explained the psychic and somatic manifestations of the menopause.
3. The vasomotor disturbances represent an instability of arterial tension.
  - a. In the majority of cases this takes the form of a vacillating hypertension, both systolic and diastolic.
  - b. The diastolic pressure is not elevated proportionately to the systolic. This produces an increased pulse-pressure.
  - c. Hot flushes, sweating, and other vasomotor symptoms are directly created by the vacillations in arterial tension.
  - d. In a minority of cases there is arterial hypotension and here also the systolic and diastolic pressures are out of proportion.
4. Hypertension is apparently due to a relative over-sufficiency on the part of the hypophysis or the adrenals.
5. The psychic symptoms are apparently influenced by thyroid dysfunction; in the majority of cases a hyperthyroidism, in the minority, a hypothyroidism.
6. The administration of the missing hormone, represented by the extract of corpora lutea from animals in early gestation, brings about a gradual restoration to normal of the blood-pressure with disappearance of the mental symptoms.
7. This reduction of blood-pressure by organotherapy together with the disproportionate systolic and diastolic rise is offered as evidence that the hypertension is a functional one and not due to organic changes.
8. Blood-pressure estimation is essential, as a means both of measuring the degree of menopause disturbance and of controlling its therapy.
9. An occasional pressure reading is of little or no value. Tension must be determined at frequent intervals, preferably daily until improvement is well under way.
10. The significance of functional hypertension as a factor in uterine haemorrhage is obvious and will be made the subject of a subsequent report.

L. F. Watson.

## PERSONAL AND GENERAL NEWS

- Dr. B. F. Collins, of Stilwell, has moved to Nowata.
- Dr. C. A. Howell, of Frederick, has moved to Afton.
- Dr. I. W. Rogers, of Watts, has moved to Kelleyville.
- Dr. C. C. Gardner, will move from Atoka to McAlester.
- Dr. M. H. Edens has moved from Verden to Anadarko.
- Dr. C. H. Day has moved from Thackerville to Ardmore.
- Dr. C. D. Dale, Keota, will move from that place to Caddo.
- Dr. M. A. Warhurst has moved from Sylvian to Seminole.
- Dr. W. D. Dawson, Mangum, has moved to Grenado, Col.
- Dr. D. A. Shoun, Fairfax, is visiting the Rochester Clinics.
- Dr. E. T. Sandberg has moved from Cordell to Cardinal, Va.
- Dr. C. L. Hood, Indianahoma, recently suffered a fractured arm.
- Dr. J. M. McQuaid, is moving from Cloud Chief to Lookeba.
- Dr. D. Armstrong announces his removal from Mead to Durant.
- Dr. and Mrs. M. M. Webster, Stratford, visited Georgia in December.
- Dr. and Mrs. J. E. Bercaw, Okmulgee, visited San Antonio in December.
- Dr. G. M. Clifton, Norman, is doing post graduate work at Tulane University.
- Dr. W. J. Whitaker, of Pryor, has returned from post-graduate work in Chicago.
- Dr. A. B. Montgomery, Checotah, visited the home folks in Rock Island in December.
- Dr. P. M. Harraway, Marlow, was recently painfully injured by falling down a stairway.
- Dr. M. Gray, of Mountain View, is spending three months in the New Orleans Polyclinic.
- Dr. S. E. Gayman, Agra, will spend several months in New Orleans in postgraduate work.
- Nowata will have a new hospital if the plans of some of its progressive citizens materialize.
- Dr. W. P. Fite, Muskogee, is in the New York Polyclinic where he will spend a year as interne.

**Dr. Horace Reed**, Oklahoma City, was operated for appendicitis in December. He is recovering nicely.

**Dr. J. H. Harms**, Cordell, and his wife were severely bruised when he drove his car into an open bridge.

**Drs. D. Long, Duncan, and J. P. Bartley**, Comanche, have formed a partnership for practice in the former place.

**Dr. C. E. Damrel**, of Tulsa, died December 17, in Enid. Dr. Damrel had been ill with heart disease for sometime.

**Drs. J. E. Farber, Cordell, and E. T. Robinson**, Cleveland, attended the Atlantic meeting of the Southern Association.

**Dr. John A. Martin**, Shamrock, has given up his location and will spend some time in the East doing postgraduate work.

**Dr. and Mrs. Roscoe Walker**, Pawhuska, have returned from a visit to New York, where Dr. Walker attended the clinics.

**Drs. D. Long, Duncan, and J. P. Bartley**, Comanche, announced the formation of a partnership and will practice in Duncan.

**Dr. L. T. Gooch**, Lawton, has been appointed county physician, vice Dr. J. C. Johnstone, who has moved to another location.

**Dr. R. L. Baker**, Wynnewood, is the latest victim of the ubiquitous Ford, and as a result of the meeting is nursing a fractured arm.

**Dr. E. G. Newell**, Oklahoma City, narrowly escaped death in a car that turned turtle near the city. The driver was instantly killed.

**Dr. J. W. Pollard**, who left Bartlesville sometime ago for his health, writes from Ft. Lupton, Colorado, that he has greatly improved.

**Dr. L. A. Milne**, Lawton, who has been absent with the Medical Reserve Corps of the Army, has returned and will resume his practice.

**Mrs. A. R. Lewis**, wife of Dr. Lewis of Ryan, died in that city November 27th. Dr. Lewis has the sympathy of many friends in his grief.

**Dr. H. S. Garland**, Sapulpa, lost his very valuable Cole car recently. The thief drove the car away and no trace has been found of it since.

**Dr. A. C. Hirshfield**, Oklahoma City, attached to the Oklahoma Regiment, is confined to the Post Hospital, Brownsville, with a broken leg.

**Dr. W. B. Tilton**, Clinton, has been assigned physician to the Uintah and Ouray Indian reservation with headquarters at Ft. Duchesne, Utah.

**Drs. R. M. Howard**, W. M. Ferguson and A. D. Young, Oklahoma City, visited San Antonio in December, from that point taking a hunting trip.

**Durant**, suspicious of the water supply of the city on account of typhoid prevalence, has been assured of its purity by repeated bacteriological tests.

**Dr. J. L. Austin**, Durant, has been appointed city health officer, vice Dr. J. L. Kay, who has been assigned service with the Medical Reserve Corps.

**Dr. D. D. McHenry**, Oklahoma City, attended the meeting of the American Academy of Ophthalmology and Oto-laryngology at Memphis in December.

**Oklmulgee County Medical Society** met in Henryetta for its annual meeting, December 12. The physicians were tendered a banquet at the Campbell Hotel.

**Tuberculosis Sunday**, December 10, was held at the Christian Church, Muskogee. The physicians on the program were Drs. Chas. W. Heitzman and C. A. Thompson.

**Dr. J. G. Rafter**, City Physician, Muskogee, was severely injured December 8th, when his machine was struck by a street car. He suffered a fracture of the arm and many bruises.

**Muskogee County Medical Society** and the Muskogee Ministerial Association will hold a joint meeting soon for the purpose of effecting a permanent organization for the study of tuberculosis.

**The legal profession** of Pottawatomie County will be entertained by the Pottawatomie County Medical Society in the near future, reciprocating a banquet tendered the medics sometime ago by the lawyers.

**Creek County Medical Society** attacked a banquet at the Harvey House, December 13, the principal resistance being quail. It is said that at this meeting it was voted to increase the charges for professional services in Creek County.

**Minnesota's** compulsory regulation providing for the treatment of the eyes of all newborn babies with silver solution became effective in December. The regulation was vehemently opposed by that worthy body of pop-eyed neurotics known as Christian Scientists and others.

**Dr. A. L. Blesh**, Oklahoma City, was one of the guests of honor with Dean Lewis of Chicago of the Jackson County Medical Society, Kansas City, December 11th. Dr. Blesh delivered an address before the society and then attended a meeting of the Western Surgical Association at St. Paul, reading a paper before that body.

**Dr. W. A. Fowler**, Oklahoma City, announces to the profession, the opening of a modern, well equipped Lying-In Hospital at 914 West Thirteenth Street, Oklahoma City. Dr. Fowler for many years has given special attention to obstetrics and in this venture has gone to great expense to make his hospital thoroughly up-to-date. The institution will be open to the reputable members of the medical profession.

**Tulsa County Medical Society** held its annual meeting, Monday, December 17. The meeting was held at the Oklahoma Hospital. A banquet was tendered the visiting physicians. Among the physicians addressing the body were Drs. John W. Duke, State Commissioner of Health; LeRoy Long, Dean of the Medical Department of the University; De Zel Hawley, City Superintendent of Health, and Fred S. Clinton, President of the Oklahoma Hospital.

**Pottawatomie County** physicians were entertained by the Pottawatomie County Bar Association, December 15, a banquet being tendered the medics by the legal profession. The banquet was said to be irreproachable in its perfection, while the mental pabulum offered the guests was suggestive of the occupation of the two professions. For instance, "The way to tell the difference between a mushroom and a toadstool is: Try it—if you live, it is a mushroom; if you die it is a toadstool."

"There was a fool who framed his speech,

Even as you and I,

A hit, a peach, a scream, a screech,

But the toastmaster passed him by."

"Is it possible for a doctor to advertise as much as a lawyer?"

Physicians from all over the county attended the meeting.

## CORRESPONDENCE AND MISCELLANEOUS

FROM THE OKLAHOMA STATE BOARD OF HEALTH, GUTHRIE, OKLAHOMA.  
DR. JOHN W. DUKE, COMMISSIONER.

### RURAL SANITATION

There is a widely prevalent belief that conditions in the rural districts including farms and small towns are more favorable to healthfulness than in the cities. This is a natural assumption, but the facts are that certain of the communicable diseases, such as typhoid fever, are more prevalent in rural communities because less attention generally is paid in the country districts to sanitation.

In cities, with their more dense population, it has been rendered imperative to provide pure water supplies, sewerage systems and proper disposal of garbage, which, together with a stronger public sentiment demanding enforcement of restrictive measures against the spread of contagion, has resulted in a much greater reduction in the rate of diseases dependent upon sanitation. In fact typhoid fever is now looked upon as much more of a rural and small town problem than one directly affecting the larger cities. The inhabitants of the farms and villages of Oklahoma should understand that unsanitary outhouses, contaminated wells and filthy fly-breeding conditions are dangerous wherever they exist and should be abated. State and local health work should meet with a strong and favorable public sentiment. The State Board of Health and the officials and physicians who are aiding it in its work have only one object in view—the betterment of public health. It would be difficult, if not impossible, to name any object which is more for the benefit of the public or better deserves their unfaltering support.

### WHOOPIING COUGH AND MEASLES.

Not only are whooping cough and measles two of the most prevalent of children's diseases, but there is still a disposition on the part of far too many parents to regard them as comparatively trivial, in some cases almost necessary accompaniment of childhood. No greater mistake could be made. Each of these diseases every year takes a much heavier toll of young life in this state than diseases which arouse more apprehension, but are less common. It is depressing to consider the unnecessary, because, preventable, suffering and loss of child life. Physicians and health officers find these two diseases among the most difficult to control because of the yet too prevalent belief that they are so mild and devoid of danger to life that precautions are not necessary. Yet as a matter of fact whooping cough and measles each year claim more victims in Oklahoma and throughout the country generally than scarlet fever or diphtheria. Whooping cough especially is one of the most fatal diseases in infants under two years of age. Permanent physical impairments from complications frequently follow both whooping cough and measles.

The belief that all, or even a great percentage of children must necessarily contract whooping cough or measles is wholly ungrounded. They are contagious diseases and communicated only by contact with a person affected. Therefore if each case was promptly isolated until recovery, absolute control of the infection could be accomplished.

The diseases in question destroy many more lives in the United States than infantile paralysis, which created such alarm throughout the country, but it is the unusual which excites dread.

Measles begin with symptoms resembling a cold, such as running at the nose, fever and cough, which generally continue for several days before the rash appears. Whooping cough begins with an



apparently ordinary cough and the "whoop" usually does not appear for several days. It is in the early stages that both diseases are most contagious and children with the symptoms described should not be allowed to attend school or mingle with other children.

### PREJUDICE VERSUS HEALTH.

One of the greatest obstacles to effective health work is the prejudice held in certain quarters against methods and measures which long since have been proven beneficial. Of course these prejudices are due to ignorance, for every human being desires health rather than illness. It is also true that many of these prejudices have vanished in recent years, that others are losing their force. Yet it still remains unfortunately true that health officers, physicians, sanitarians and others who are working for the public health too often find their efforts handicapped by popular beliefs which long since have been proven unfounded.

Nothing in medical science is more clearly established than that vaccination is the great preventive of smallpox. In former centuries smallpox was one of the scourges of the world. Its victims were to be found in every community, no matter how small. The death rate was enormous and many of those who escaped death were disfigured for life. Even in civilized communities its toll was huge, while among uncivilized peoples whole tribes were sometimes swept out of existence. Now the death rate from smallpox is extremely small and it will entirely disappear just as soon as vaccination becomes universal. Yet even today there are many persons who question the value of vaccination and an organized propaganda against it not only exists, but has no trouble in finding funds. There is an old proverb about leaving fools to the consequences of their own folly, but unfortunately the person who refuses to be vaccinated not only risks his own health and life, but is a distinct menace to the entire community. The only remedy is for the state to exercise more thoroughly and drastically its unquestionable right to enforce restrictions which are for the protection of the community.

Many lives have been needlessly lost in Oklahoma, others unquestionably will be, simply because some parents are prejudiced against the use of diphtheria anti-toxin. There is absolutely no question as to the value of anti-toxin in diphtheria cases. Carefully kept statistics covering a large number of cases in New York state showed conclusively that the death and morbidity rates had been greatly decreased by the use of anti-toxin. It is true that it is a remedy which should be administered only by a competent physician, but that is true of most effective remedies. By the use of the Schick test it can be readily ascertained whether or not a person is liable to diphtheria. Diphtheria anti-toxin if used in time tremendously reduces the danger from the disease. When the public realizes the value of these remedies, diphtheria will cease to be the dreaded disease it is at present.

Typhoid annually takes a heavy toll of victims in this and other states. Yet protection against typhoid is an easy and simple matter. The experience of the United States army, even more the experience of the immense forces fighting in Europe proves this. In former wars the toll from typhoid has been heavier than that from bullets and shells. In this war although many of the conditions are unsanitary to a marked degree, typhoid is almost unknown. The only reason is that typhoid inoculation is insisted upon. It is a simple operation with very slight after results. It will for a long time render the person taking it immune from typhoid. Its general use would practically eliminate typhoid.

There are other diseases, the precautions against which are perfectly assured, but which continue their ravages simply because the public will not recognize these precautions. It is true that medical science is an exact science in the sense that mathematics; new factors and conditions are constantly arising. But where long series of experiments and tests have shown that certain remedies produce certain results, it is folly not to take advantage of these conclusions.

### PARTIAL VACUUM METHOD

H. G. Beck, Baltimore (*Journal A. M. A.*, Dec. 2, 1916), after stating the disadvantages of the various appliances used in methods of diagnosis and treatment based on the principle of suction by rubber bulbs, or the various aspirating pumps and syringes, describes an apparatus for suction in the form of a simple inexpensive filter pump connected by means of heavy rubber tubing with an ordinary vacuum gage. It is provided with an adjustment for regulating the degree of vacuum. Any degree of constant suction as expressed in inches of mercury can be obtained, or by the use of a release valve or cut-off can be interrupted. The steady constant suction is used in aspirating stomach contents, pleural effusions, blood letting, etc., and the interrupted in Biers hyperemic cupping, breast pumping, etc. Methods of application for these purposes are described in detail. The suction principle has recently been adopted for keeping the field clean and dry in operative nose and throat work, as well as for draining infected sinuses. In general surgery it has also been employed for draining, especially in abdominal surgery. The article is illustrated.

### THE WASSERMANN REACTION

J. T. King, Jr., Baltimore (*Journal A. M. A.*, Dec. 2, 1916), reports some investigations in regard to the so-called provocative test for syphilis. He selected patients with known positive Wassermann reaction and in various stages and forms of syphilis of the central nervous system and aorta, tabes dorsalis and paresis. In some the test was done before the administration of salvarsan, and four, eighteen, twenty-four and forty-eight hours after the injection. Most of the patients, however, were followed over five days, and some for several weeks. The details of making the test are given and the results tabulated. His conclusions as stated are: 1. In most cases little change occurs in the strength of the

Wassermann reaction during the first five days following the administration of salvarsan. In this series of twenty treatments, only one case, in the primary stage, showed a marked weakening of the test. 2. Some previously untreated cases may be given prolonged salvarsan therapy with very little weakening of the Wassermann reaction. Such cases, however, show striking improvement symptomatically. 3. In this series only one insignificant temporary increase (provocative reaction) in the complement-binding substance could be demonstrated, following the administration of salvarsan. 4. It is improbable that, over short periods of time, there occurs any marked spontaneous fluctuation in the amount of complement-fixing substance in the blood of syphilitics. 5. Definite proof of the existence of the provocative Wassermann reaction following salvarsan is not at hand at the present time.

#### NEW AND NON-OFFICIAL REMEDIES

During November the following articles have been accepted by the Council on Pharmacy and Chemistry for inclusion with New and Non-official Remedies:

**H. K. Mulford Company:** Mercurialized Serum-Mulford, No. 5-A and 5-B. Mercurialized Serum-Mulford, No. 6-A and 6-B.

**Swan-Myers Company:** Swan's *Bacillus Bulgaricus*.

**Swan's *Bacillus Bulgaricus*.**—A pure culture in tubes of the *Bacillus bulgaricus*. It is designed for internal administration and for direct application to body cavities, abscesses and wounds. The culture is supplied in boxes of twelve tubes. The tubes must be kept in a cool place and must not be used after the date stamped on the package. Swan-Myers Company, Indianapolis, Ind. (*Journal A. M. A.*, Nov. 25, 1916, p. 1601).

#### PROPAGANDA FOR REFORM.

**Patent Medicine Prosecutions Under the Food and Drugs Act.**—The following information was brought out in connection with prosecutions by the federal authorities chiefly under that portion of the Food and Drugs Act which provides penalties against misleading, false and unwarranted therapeutic claims: Dr. Porter's Antiseptic Healing Oil was found to be essentially a solution of camphor and carbolic acid in cottonseed oil. It was claimed to be an excellent remedy for cuts, sores, old chronic ulcers, corns, bunions and a preventive of whooping cough, diphtheria and tuberculosis. Ballard's Horehound Syrup Compound was sold "For Consumption, Coughs and Colds" and other diseases. Dr. Shoop's Night Cure, was claimed promptly to cure ulceration, inflammation or congestion of the womb, leucorrhoea, painful ovaries and other female diseases. It was found to be a suppository containing zinc carbonate, zinc sulphate and boric acid in a cacao butter. Dr. Shoop's Cough Remedy was found to be a syrup containing ammonium benzoate and probably white pine tar and gum. Dr. Shoop's Restorative was sold for the cure of all diseases of the stomach, liver and blood and still other diseases. Father John's Medicine was advertised as a consumption "cure". Dr. Shoop's Twenty Minute Croup Remedy was found to be a syrup containing glycerine and a small amount of salicylic acid. Bad-Em Salz was found to consist of sodium chloride, sodium sulphate, sodium bicarbonate, and a small amount of tartaric acid. It was sold with claims suggesting that it was derived from European springs and that it dissolved gallstones and gravel in the kidneys or bladder. Kennedy's Cal-Cura Solvent was a water-alcohol liquid containing 2.44 per cent. potassium acetate, 16.75 per cent. alcohol, 52.46 per cent. cane sugar and vegetable matter resembling mint, cardamom and horehound. From the claims which were made one would get the impression that there could be few ills that it would not cure. (*Journal A. M. A.*, Nov. 4, 1916, p. 1385-6).

**Intravenous Therapy.**—The technic, although not difficult, must be thoroughly mastered, or undue pain, infection, air embolism, or even death may result. Often a drug has an action different from that obtained by the usual method of administration. Deaths have resulted not only from a lack of proper technic, but also from a lack of knowledge of drugs so administered. Thus death has followed the injection of an iron preparation containing peptone, and also following intravenous injection of ether. Intravenous injections, while sometimes superior to the slower methods, are distinctly inferior when a continuous rather than a sudden action is desired as with iodids, nitrites, iron or salicylates. Intravenous injections should not be resorted to unless distinct advantages are to be secured as when immediate action is necessary in emergencies, where the drug is not otherwise absorbed or is destroyed in the stomach. In the light of our insufficient knowledge of the action of simple drugs when administered intravenously, the injection of complex mixtures of drugs is particularly reprehensible. (*Journal A. M. A.*, Nov. 11, 1916, p. 1450).

**What Ailed Him?**—A druggist wants to know what ailed the patient for whom the following was prescribed: calomel 1 grain, potassium iodide 4 drachms, potassium bromide 3 drachms, potassium citrate 5 drachms, tincture of aconite 2 fluidrachms, wine of ipecac 1 fluidounce, chloroform water to make 3 fluidounces. Without venturing a guess regarding the patient's illness, it is suggested that if anything new was wrong with the patient after he took the medicine, the case may be diagnosed as one of misplaced confidence, either the physician's misplaced confidence in drugs or the patient's misplaced confidence in the physician. (*Journal A. M. A.*, Nov. 18, 1916, p. 1541).

**Unna's Paste for Varicose Veins.**—In the treatment of varicose ulcers of a mild form Dr. Ochsner prepared a boot composed of several layers of a bandage each treated with Unna's paste applied hot. The paste consists of gelatine 4 parts dissolved in 10 parts hot water to which 10 parts glycerin and 4 parts zinc oxide are added. (*Journal A. M. A.*, Nov. 25, 1916, p. 1617).

**Toilet Lotion.**—Nothing is better to soften and whiten the skin than the official cold cream. For oily skins a tragacanth lotion is suitable. (*Journal A. M. A.*, Nov. 25, 1916, p. 1618).

## OFFICERS OF COUNTY SOCIETIES

County	President	Secretary
Adair .....	J. Patton, Stilwell	A. J. Sands, Watts
Alfalfa .....		
Atoka .....		
Beaver .....		
Beckham .....	J. E. Yarbrough, Erick	
Blaine .....		
Bryan .....	J. H. Shuler, Durant	D. Armstrong, Mead
Caddo .....		
Canadian .....	P. F. Herod, ElReno	W. J. Muzzy, ElReno
Choctaw .....		
Carter .....		
Cleveland .....		
Cherokee .....		
Custer .....		
Comanche .....	L. A. Milne, Lawton	G. Pinnell, Lawton
Coal .....		
Cotton .....		
Craig .....	C. S. Neer, Vinita	W. R. Marks, Vinita
Creek .....		
Dewey .....		
Ellis .....		
Garfield .....	W. L. Kendall, Enid	James H. Hays, Enid
Garvin .....		
Grady .....	E. E. Dawson, Chickasha	Martha Bledsoe, Chickasha
Grant .....		
Greer .....		
Harmon .....		
Haskell .....	M. VanMatre, Keota	J. R. Waltrip, Kinta
Hughes .....		
Jackson .....	D. C. Buck, Eldorado	W. H. Rutland, Altus
Jefferson .....		
Johnson .....		
Kay .....		
Kingfisher .....		
Kiowa .....	Wm. McIlwain, Lonewolf	A. L. Wagoner, Hobart
Latimer .....		
Le Flore .....		
Lincoln .....		
Logan .....		
Love .....		
Mayes .....		
Major .....		
Marshall .....		
McClain .....		
McCurtain .....		
McIntosh .....	W. P. Lee, Checotah	Wm. A. Tolleson, Eufaula
Murray .....		
Muskogee .....	I. B. Oldham, Muskogee	J. G. Noble, Muskogee
Noble .....		
Nowata .....		
Okfuskee .....	H. A. May, Okemah	Jno. L. Sims, Weleetka
Oklahoma .....		
Okmulgee .....	N. N. Simpson, Henryetta	H. E. Breese, Henryetta
Ottawa .....		
Osage .....		
Pawnee .....		
Payne .....		
Pittsburg .....	J. O. Grubbs, N. McAlester	J. C. Johnston, McAlester
Pottawatomie .....		
Pontotoc .....		
Pushmataha .....		
Rogers .....	W. E. Smith, Collinsville	W. A. Howard, Chelsea
Roger Mills .....		
Seminole .....		
Sequoyah .....		
Stephens .....		
Texas .....		
Tulsa .....		
Tillman .....	A. J. Hays, Frederick	J. E. Arrington, Frederick
Wagoner .....		
Washita .....	D. W. Bennett, Sentinel	A. S. Neal, Cordell
Washington .....	W. E. Rammel, Bartlesville	J. G. Smith, Bartlesville
Woodward .....		
Woods .....	Isaac Hunt, Freedom	D. B. Ensor, Hopeton



## OFFICERS OF OKLAHOMA STATE MEDICAL ASSOCIATION—ELECTION MAY 11, 1916.

Meeting Place—Lawton-Medicine Park, May 9, 10, 11, 1917.

President, 1916-17—Dr. Chas. R. Hume, Anadarko.

President-elect, 1917-18—Dr. W. Albert Cook, Tulsa.

1st Vice-President—Dr. Fowler Border, Mangum; 2nd Vice-President—Dr. A. R. Lewis, Ryan;  
3rd Vice-President—Dr. Horace Reed, Oklahoma City.

Secretary-Treasurer-Editor—Dr. C. A. Thompson, Muskogee.

Delegates to American Medical Association—Dr. John Riley, Oklahoma City, 1917; Dr. M. A. Kelso, Enid, 1917-18.

## COUNCILOR DISTRICTS.

1. Cimarron, Texas, Beaver, Harper, Ellis, Woods and Woodward; Councilor, Dr. J. M. Workman, Woodward. Term expires 1919.
2. Roger Mills, Beckham, Dewey, Custer, Washita and Woodward; Councilor, Dr. Ellis Lamb, Clinton.
3. Harmon, Greer, Jackson, Kiowa, Tillman, Comanche and Cotton; Councilor, Dr. G. P. Cherry, Mangum.
4. Major, Alfalfa, Grant, Garfield, Noble and Kay; Councilor, Dr. G. A. Boyle, Enid. Term expires 1919.
5. Kingfisher, Canadian, Oklahoma and Logan; Councilor, Dr. Fred Y. Cronk, Guthrie.
6. Caddo, Grady, McClain, Garvin, Stephens and Jefferson; Councilor, Dr. C. M. Maupin, Waurika. Term expires 1919.
7. Osage, Pawnee, Creek, Okfuskee, Okmulgee and Tulsa; Councilor, Dr. Walter E. Wright, Tulsa.
8. Payne, Lincoln, Cleveland, Pottawatomie and Seminole; Councilor, Dr. H. M. Williams, Wellston.
9. Pontotoc, Murray, Carter, Love, Marshall, Johnston and Coal; Councilor, Dr. J. T. Slover, Sulphur.
10. Washington, Nowata, Rogers, Craig, Ottawa, Mayes and Delaware; Councilor, Dr. R. L. Mitchell, Vinita.
11. Wagoner, Muskogee, McIntosh, Haskell, Cherokee and Adair; Councilor, Dr. P. P. Nesbitt, Muskogee.
12. Hughes, Pittsburg, Latimer, LeFlore and Sequoyah; Councilor, Dr. L. S. Willour, McAlester. Term expires 1919.
13. Atoka, Pushmataha, Bryan, Choctaw and McCurtain; Councilor, Dr. J. L. Austin, Durant.

## CHAIRMEN OF SCIENTIFIC SECTIONS.


- Surgery and Gynecology—Dr. McLain Rogers, Clinton.  
 Pediatrics and Obstetrics—Dr. L. W. Cotton, Enid.  
 Eye, Ear, Nose and Throat—Dr. A. W. Roth, Tulsa.  
 General Medicine, Nervous and Mental Diseases—Dr. A. K. West, Oklahoma City.  
 Genitourinary, Skin and Radiology—Dr. C. R. Day, Oklahoma City.  
 Legislative Committee—Dr. Millington Smith, Oklahoma City; Dr. J. M. Byrum, Shawnee;  
 Dr. W. T. Salmon, Oklahoma City.  
 For the Study and Control of Cancer—Drs. LeRoy Long, Oklahoma City; Gayfree Ellison, Norman; D. A. Myers, Lawton.  
 For the Study and Control of Pellagra—Drs. J. Lewis Day, Norman, Chas. R. Hume, Anadarko;  
 J. C. Watkins, Checotah.  
 For the Study of Venereal Diseases—Drs. Wm. J. Wallace, Oklahoma City; Ross Grosshart, Tulsa; J. E. Bercaw, Okmulgee.  
 Necrology—Drs. Martha Bledsoe, Chickasha; J. W. Pollard, Bartlesville.  
 Tuberculosis—Drs. L. J. Moorman, Oklahoma City; C. W. Heitzman, Muskogee; Leila E. Andrews, Oklahoma City.  
 Conservation of Vision—Drs. L. A. Newton, Guthrie; L. Haynes Buxton, Oklahoma City; G. E. Hartshorne, Shawnee.  
 Committee on First Aid—Drs. F. H. Clark, El Reno; Chas. Blickensderfer, Shawnee; Jas. C. Johnston, McAlester.  
 Committee on Medical Education—Drs. A. L. Blesh, A. K. West, A. W. White, Oklahoma City.  
 State Commissioner of Health—Dr. John W. Duke, Guthrie, Oklahoma.

## STATE BOARD OF MEDICAL EXAMINERS.

- LeRoy Bonnell, President, Chickasha; R. V. Smith, Secretary, Tulsa; J. J. Williams, Weatherford;  
 B. L. Dennison, Vice Pres., Garvin; W. T. Ray, Gould; M. Gray, Mountain View; H. C. Montague,  
 Muskogee, and O. J. Gregg, Alva.  
 Reciprocity with Georgia, Kentucky, Mississippi, Nevada, North Carolina, Wisconsin, Kansas,  
 Michigan, Nebraska, New Mexico, South Dakota, Tennessee, West Virginia.  
 Meetings held second Tuesday of January, April, July and October, Oklahoma City.  
 Address all communications to the Secretary, Dr. R. V. Smith, Daniel bldg., Tulsa.

# THE JOURNAL

of the



## Oklahoma State Medical Association

VOLUME X

MUSKOGEE, OKLA., FEBRUARY, 1917

NUMBER 2

### SYMPOSIUM ON KERATITIS\*

- (1) "Etiology and Pathology of Keratitis," Philip F. Herod, M. D., El Reno, Okla.
- (2) "Symptoms and Diagnosis of Keratitis," E. S. Ferguson, M. D., Oklahoma City, Okla.
- (3) "Treatment of Keratitis," D. D. McHenry, M. D., Oklahoma City, Okla.

### ETIOLOGY AND PATHOLOGY OF KERATITIS

PHILIP F. HEROD, M. D., El Reno, Okla.

Etiologically, keratitis may be considered under two groups, namely, primary and secondary. The former consists of those inflammations which have their beginning in the cornea itself and are principally of traumatic origin, followed by the entrance of some pathogenic organism. The secondary group consists of those inflammations which have extended from adjacent tissue, or are due to neurotic or circulatory changes or to constitutional diseases.

Pathologically, keratitis is also separated into two groups—suppurative and non-suppurative, the former always being associated with destruction of the corneal lamellae.

Of all the forms of keratitis, ulcer is by far the most important on account of its frequency and the permanent defect in vision which may result. It usually occurs in those whose vitality is low. Especially is this true of phlyctenular ulcer which is most common in poorly nourished children. In about 90 per cent of cases, ulcer is the result of an abrasion of the superficial epithelium. The infecting organism, most common of which is the staphylococci, streptococci, pneumococci, and the diplobacilli of Morax-Axenfeld, is either introduced at the time of injury by the object causing the abrasion or finds its way there before the surface of the cornea is regenerated.

Ulcers due to neurotic and circulatory changes, depend also upon the introduction of some organism which obtains an easy entrance through the broken down corneal structures. But inasmuch as the resistance to the invading organism is so low the result is usually much more disastrous. Following the initial infiltration there is an exfoliation of epithelium and the infiltrated area is soon broken down. The extent of the ulcer depends upon the amount of white cell infiltration which may be superficial and result in an extensive corneal opacity or extend deeply into

\*Read in the Eye, Ear, Nose and Throat Section, annual meeting Oklahoma State Medical Assn. Oklahoma City, May 10, 1916.

the corneal structure eventually involving Descemet's membrane and causing a perforation. As the infection subsides, the epithelium quickly regenerates, forming a protective layer over the site of the ulcer. The fixed corneal cells now increase by division, forming connective tissue, which replaces the lost portion of the cornea, gradually filling the depression and leaving a more or less dense opacity.

The deposit on the posterior surface of the cornea which is so often associated with keratitis is due to the increased amount of fibrin and white corpuscles in the aqueous caused by the action of the corneal irritant upon the blood vessels of the uveal tract. An overloading of the aqueous with these products, especially the white cells, will cause them to precipitate to the bottom of the anterior chamber. Unless this hypopyon becomes organized or infected it is finally absorbed through the Spaces of Fontana.

Of the non-suppurative types of keratitis, pannus is the most common. It is essentially a layer of new formed tissue extending from a pre-existing conjunctival inflammation, usually trachoma or less often eczema.

The invading tissue is very rich in blood vessels and new cells, and works its way between Bowman's membrane and the overlying epithelium. In recent cases the new growth may be absorbed, leaving the cornea intact, but in neglected cases Bowman's membrane is destroyed and new cell infiltration causes a permanent clouding of the cornea.

Vesicular keratitis is also a superficial inflammation of the non-suppurative type. It is associated with the febrile diseases, and with Herpes, involving the trifacial nerve. Small collections of serum resting upon Bowman's membrane raise the epithelial layer and form numerous thin walled vesicles. The violent symptoms of irritation are caused by the stretching of nerve endings which, when ruptured, account for the diminished sensitiveness of the cornea to touch. As soon as the vesicles rupture, the epithelium is quickly regenerated and unless infected heals without opacity.

The deep forms of non-suppurative keratitis, of which parenchymatous keratitis, sclerosing keratitis and keratitis profunda are the most important, are very similar in their pathology.

The usual cause of parenchymatous keratitis is hereditary syphilis, and less often acquired syphilis. Occasionally tuberculosis seems to be an etiological factor, and again no cause can be ascribed. It is a disease of youth and affects the female sex most frequently. Its appearance is first made as a small infiltrated area situated deeply at the margin or center of the cornea. The marginal vessels extend in broomlike branches toward the grayish maculae and have a red gray appearance. The cloudiness of the cornea is caused by groups of unicellular leucocytes in the deep layers. The same cellular grouping may be found in the uveitis which invariably accompanies the keratitis. In the regressive period of the disease the cellular deposit is gradually resorbed and the corneal blood vessels eventually disappear, and in favorable cases leave the cornea but slightly damaged.

The etiology of keratitis profunda is somewhat obscure. It has been ascribed to the effects of rheumatism, malaria, injuries to the cornea and cold. The disease may or may not be accompanied by inflammation of uvea. Like parenchymatous keratitis, groups of white cells are deposited between the deep layers of the cornea but there is little or no formation of new blood vessels.

Sclerosing keratitis so often follows scleritis and the dense opacity remaining bears such a close resemblance to the sclera that it may be considered a corneal involvement of that disease. The opacity of the cornea is more dense than in any other form of deep keratitis and is limited only by the extent of corneal tissue involved.



## SYMPTOMS AND DIAGNOSIS OF KERATITIS.

E. S. FERGUSON, M. D., Oklahoma City, Oklahoma

In an inflammation of the cornea there is always an exudate or increase of cells within the parenchyma of the cornea.

If resorption takes place without breaking down of the tissue there is no loss of substance and the case recovers, sometimes leaving the cornea as clear as before the attack. In other cases the exudate becomes organized and leaves an opacity within the layers of the cornea. These cases, whether or not they have an opacity, if there has been no loss of substance, are styled non-suppurative keratitis.

However, if the exudation goes on to such an extent that the stroma can no longer retain its life, disintegration takes place and a loss of substance will result. This loss of substance will always leave an opacity, varying in density according to the amount of destruction. These cases all are classed as suppurative keratitis. To demonstrate a defect in the corneal epithelium, use a 2 per cent solution of fluorescein. The denuded portion will be stained a vivid green and easily distinguished from the surrounding tissue.

While any classification of this disease may be open to criticism, a description will be given of the symptoms of the principal forms in both suppurative and non-suppurative keratitis.

Phlyctenular keratitis manifests itself on the cornea as a secondary involvement, following the same condition of the conjunctiva. The most frequent point affected is at the cornea-scleral junction. There will be present a small gray colored collection of round cells underneath the epithelium, which soon breaks down and a superficial ulcer results. Local congestion will be noticed radiating from the infected point and there is usually some lachrymation and photophobia, though this will be more acute if the phlyctenule extends well into the corneal tissue. The disease usually runs a rather chronic course with recurring phlyctenules, either singly or multiple, appearing over a considerable period of time. The resulting opacity will depend upon the extent of the ulceration. Many of these cases clear up entirely but at times permanent scars are left behind.

In corneal ulcer an infiltrated point breaks down and there is a loss of substance in the parenchyma of the cornea. While the ulcer may be confined to a small area, very often it spreads by infiltration in different direction from the original point and may involve the whole cornea or a considerable part of it at least. The eye becomes irritable with circumcorneal infection, photophobia, lachrymation, pain and dimness of vision. If the case is severe the inflammation extends to deeper structures. The iris is inflamed with turbidity of the aqueous and not infrequently hypopyon results. The symptoms in this case would be that of a severe iritis, contracted pupil, swelled and discolored iris, posterior synechia, etc.

When the ulcer stops spreading, the necrotic tissue is thrown off, the infiltration disappears and the point where loss of substance has taken place is filled up with connective or scar tissue, leaving a permanent opacity. All the distressing symptoms disappear quickly as soon as the progress of the ulcer is arrested and its edges become clean.

If the ulcer, instead of progressing superficially, burrows deeply, perforation results, manifested usually by severe pain and the escape of aqueous. When the tissue is destroyed down to the inner layers of the cornea the blepharospasm is a factor in causing perforation. This pressure of the lids is sometimes marked and the probable increase in intraocular pressure aids in the disastrous consequences. Nearly always when the ulcer perforates, the patient feels much better and the ulcer soon begins to heal. However, complications are the rule and unless extremely carefully handled, the iris will be found prolapsed into the perforated wound. While it may be possible to relieve the prolapsed iris, more often it will remain as an anterior synechia. However, that condition is not a serious one unless the whole iris is caught up in the wound causing occlusion and exclusion of the pupil.

In the case of a serpiginous ulcer the spreading takes place in one direction, recognized by the gray cloudiness or infiltrate in that direction. Usually these cases creep rapidly over the surface of the cornea and healing almost as rapidly on the opposite side.

This ulcer is usually extremely severe, the whole cornea somewhat cloudy with swelling of the lids and marked ciliary congestion. It is very apt to be complicated with deeper inflammatory involvement of the iris and ciliary body. Hypopyon generally results, and very frequently a general infection, "panophthalmitis" with loss of the eye.

Even in the favorable cases there will be a decided opacity of the cornea with marked impairment of vision owing to the malignancy of its course. Serpiginous ulcer is one of the most serious conditions with which you will have to deal in eye diseases. Even in the cases where spreading has not been marked, the resulting scar is dense and impenetrable to light. Nearly always situated somewhere near the center of cornea, making it necessary to perform an iridectomy to give good sight.

In keratitis lagophthalmo the cornea suffers from failure of the lids to cover the eye ball. The corneal epithelium, constantly exposed to the air without the customary moisture distributed by the lids in winking, soon becomes dull and cloudy. This cloudiness of the cornea increases and a degeneration of the epithelial covering of the eye takes place allowing an infection which soon develops into an ulcer. These cases are usually severe and frequently complicated with iritis, iridocyclitis, hypopyon, probably perforation and loss of the eye by panophthalmitis.

Keratomalacia usually occurs in small children poorly nourished. One of the first symptoms is night blindness, which of course in the small child may be hard to determine. In these cases probably the first thing that will attract the attention will be the extreme dryness of the conjunctiva, showing as xerotic spots triangular in shape on each side of the cornea in the palpebral fissure. A foamy appearance will show over the spots, but these spots always look dry and not moistened by the conjunctiva. In fact they look like they were smeared over with grease. This dryness spreads over the eye as the disease progresses involving the cornea.

The cornea becomes dull, insensitive, with a cloudy infiltration towards the center. This may increase and cause a disintegration of the entire cornea. The usual symptoms of corneal disease are wanting and vary much out of proportion to the acute appearance of the eye. Generally the child becomes much emaciated with general apathy, diarrhea, etc., eventually dying from exhaustion.

The absence of the symptoms of irritation in these apparently acutely affected eyes, the appearance of the dry spots and the infiltrated cornea, together with the general emaciation of the patient, presents a peculiar disease and one you will hardly make a mistake in diagnosing.

Keratitis neuroparalytica attacks the eyes of patients suffering from paralysis of the trigeminus nerve. The cornea becomes dull and milky in appearance, extending over the whole surface except a narrow ring at the cornea-scleral margin a couple of mm. in width. This peculiar appearance of the cornea will be diagnostic. The affected portion becomes more cloudy and in the severe cases forms one big ulcer, over the central part; perforation takes place with the accompanying bad results mentioned in the case of the other perforating ulcers. The prognosis in these cases is always unfavorable, treatment having very little, if any, effect.

Of the non-suppurative forms of keratitis, pannus is the most frequent. The symptoms are severe in some cases and in others mild, usually depending on the accompanying disease on which the attack depends. There will be dimness of vision by obstruction, photophobia, lachrymation and more or less pain. Objectively there is new tissue formed, superficially resembling granulations. You can notice that this condition extends apparently from the conjunctiva and will be found to be a complication of trachomatous or eczematous conjunctivitis in most cases.

Vesicular keratitis only involves the superficial structures of the cornea. It appears as small or large transparent blebs on the surface, manifest mostly in blind eyes with increased tension; in cases of opaque and insensitive cornea or accompanying febrile disease such as pneumonia, influenza, bronchitis and sometimes in typhoid, malarial fever or herpes zoster. The symptoms of irritation, ciliary injections, lachrymation, photophobia and pain are extremely severe. On rupture of the vesicles these symptoms rapidly disappear and in most cases, unless neglected, the cornea heals with little, if any, resulting opacity. However, neglected cases become infected easily and an ulcer results.

Parenchymatous keratitis, sclerosing keratitis, keratitis profunda and a keratitis starting from the posterior surface of the cornea, represent the main forms of deep seated inflammation of the cornea. These various types are quite similar in that they all develop an infiltrate in the deeper structures of the cornea, which shows no tendency to suppurate but clears by resorption, so that the eye is as clear as before, or in severe cases leaving an organized infiltrate obscuring the vision permanently.

Parenchymatous keratitis presents a variable appearance ranging anywhere from a slight deep infiltrate with few, if any, irritable symptoms to one with almost complete diffuse infiltration and so highly vascularized that it looks like a piece of raw meat. This affection starts either by the formation of small maculae in the center of the cornea or it begins on the margin by the formation of these same maculae and gradually advancing towards the center. The cornea becomes lustreless and dull, the maculae increase and frequently coalesce. The cornea between the spots is cloudy and grayish. Soon the blood vessels penetrate into the substance of the cornea from the limbus, being deep seated scleral vessels. A close observation will show this vascularity advancing in tufts like a broom. Owing to the cloudiness, they appear of a grayish red color. The course of this disease is chronic, taking in most cases six or eight weeks to reach its height, then the irritative symptoms begin to clear. At first the recovery seems rapid, but on the whole the process of repair is very slow and it will take months, or years, even, to regain its transparency. In this it is only the extremely light cases that fully recover, for a close inspection will show some cloudiness in practically every case.

There is a tendency to spread to other parts of the uveal tract, iritis and irido cyclitis being common complications. This disease is accompanied by irritative symptoms of inflammation, such as pain, lachrymation, photophobia and ciliary congestion, slight or violent according to the severity of the attack.

It generally attacks both eyes but as a rule not at the same time. The gradually increasing deep seated infiltration and deep seated blood vessels and the absence of suppuration or degeneration of the infiltrate will usually make the diagnosis certain to the close observer, still the wide difference in the clinical picture depending on the severity of the attack may be confusing.

Primary glaucoma may simulate this disease, but the age of the patient, the tension of the eye ball, together with the history, will usually differentiate the two conditions. The majority of cases are syphilitic, but sometimes it may be tuberculous, so that to distinguish between the two conditions you will have to resort to the Wassermann, tuberculin, VonPirquet or other tests to clear up the diagnosis.

Sclerosing keratitis is manifest as a dense white infiltrate, triangular in shape, on the margin of the cornea. As this is supposed to be caused by an encroachment of a scleritis, the tendency to recurrence may soon involve the whole surface of the cornea. In fact the sclera seems to take the place of the cornea entirely. There is generally severe pain and other symptoms of irritation during the recurrences of the disease.

In keratitis profunda there is a dull grayish, deep seated opacity in the cornea, usually centrally located. There are rather pronounced inflammatory symptoms present. The iris may be congested but seldom assumes the dignity of an iritis. In most cases the infiltrate disappears, leaving the transparent cornea, but there



sometimes remains remnants of the opacity permanently. The fact that this disease attacks only adults and the peculiar grayish infiltrate will usually make the diagnosis comparatively easy.

Suppurative keratitis manifests itself in many different ways and we find many symptoms and conditions present which would lead to the conclusion that we might have many more forms than these described, but they present no typical picture and will not be mentioned at this time.

### TREATMENT OF KERATITIS.

D. D. McHENRY, M. D., Oklahoma City

We will follow the classification of Fuchs, which first treats of

**Simple Ulcer:** A solution of 8 to 10 per cent argyrol every 3 to 6 hours during the day and 2 per cent iodoform ointment at night will care for the simple uninfected ulcer within a few days.

Prevention of infection becomes the main object in these cases and especially after removal of foreign bodies where attempts at removal have been made by patient's friends with dirty handkerchiefs, etc. The laity should be taught that if a foreign body is not removed by very gentle efforts they may do great damage by using any other means.

If an eye that has had a foreign body removed does not heal in two or three days at the most, the patient should be sent immediately to a specialist, more especially if showing any signs of spreading or undermined edges. This advice will also apply often to the physician. Along this line we should always advise the curing of all infected tear sacs, especially if the infection is pneumococcic.

I have adopted a rule in my office, after removal of imbedded foreign bodies, of dropping in the eye 20 per cent argyrol, flush it out with boric acid solution and drop into the eye 2 per cent optochin—ethylhydrocuprein, introduced in this country by Gradle.\* Dr. Ostrom, before the R. I. surgeons in this city last December, in an article, in addition, advised giving these patients a zinc sulphate solution to use at home. The argyrol to control staphylo- and streptococci, the optochin, the pneumococci, and the zinc the Morax-Axenfeld. The latter is so rare here I do not make it a routine.

**Infected Ulcer:** If the ulcer is infected we must first, if possible, determine the nature of the infection. If bacillus Morax-Axenfeld, as we all know, zinc sulphate is a specific; if the staphylo- or streptococcus, frequent irrigation with boric acid or cyanide of mercury solution 1-5000 and the daily application of 25 per cent of argyrol or 1 per cent silver by the physicaian to the out-turned lids, or powdered iodoform, in addition to the treatment of simple ulcers, will usually control this infection. If not, I frequently follow the method of Fox and cauterize these cases with 20 to 25 per cent trichloracetic acid, and have found such treatment very beneficial. Cauterization with tincture of iodine or pure carbolic acid is used. I prefer the trichloracetic acid.

Bahr, *Klinische Monanschrift*, reports 500 cases treated with iodine, but the abstract I saw did not give the method of application nor the class of cases in which it was used. He says the action of the iodine does not extend beyond the area not covered by epithelium. Must avoid the burning of the conjunctiva by allowing the lid to close after the treatment. Use wet dressings and heat to abolish pain which is often severe. He says it leaves a smaller scar than actual cautery.

After sloughing has ceased cicatrization is hastened by the yellow oxide of mercury ointment. Occasionally it becomes necessary to cauterize these ulcers with the actual cautery, but this is rare in these forms of infection. The serums are also used, but I will refer to them later.

---

\*May be obtained from the Economical Drug Co., 122 N. State St., Chicago, Ill.

**Serpiginous Ulcer:** Or, infection by the pneumococcus, is another question. The first essential in treatment is rest in bed, to conserve general strength. The eye should be put at rest and kept so by the use of atropine. Pain is controlled by heat and dionin. Hot heat and lots of it. These control pain in most of my cases. When they do not, I use opiates. *I do not use cocaine for pain.* I have seen several eyes that were, in my opinion, lost by its use. I generally use holocain if I must anesthetize to remove a foreign body, cauterize, curette, etc., as it softens corneal epithelium much less than the cocaine. In simple uninfected ulcers I do not use atropine unless signs of iritis.

Just here let me say a word of dionin. In my hands it is a *most valuable* drug. It exerts a vaso-dilator action on lymphatics and deeper blood vessels we cannot get from any other drug, increasing lymphatics as much as ten-fold, according to Darier. It first produces slight pain, a decided burning and itching, often sneezing—which will not be so bad if the eyes are kept closed—and a sensation of increased tension in both eyes and forehead. This is followed by a decided chemosis of the bulbar conjunctiva. I have always understood this as a flushing of the lymphatics of the iris and cornea—a flushing of the sewers, we may say—allowing a more decided action from any drug used after it, and by this action not only absorbs the products of acute inflammations, but is also our best weapon for attacking old opacities. Its final effect is analgesic, which lasts for from 5 to 7 hours.

I formerly cauterized these cases with trichloroacetic acid, as mentioned above, followed by powdered iodoform. If the ulcer had not ceased spreading in 24 hours, I used the actual cautery. Since my experience with optochin (limited to four cases), I have not had to cauterize an ulcer. I follow the method advised by Ramsay of Glasgow in his article in *Ophthalmic Record* of September, 1915. First anesthetize with holocain and stain with fluorescein; wash off loose slough from floor of ulcer with irrigation; a swab of sterilized cotton sufficiently large to cover the whole of the ulcerated surface is saturated with a 2 per cent solution of optochin and applied to the ulcer and kept in firm contact with its floor and margins for about two minutes. This causes a little sharp burning pain lasting about 5 to 10 minutes. At the end of 15 to 20 minutes there is full anesthesia of the cornea which will last for a half hour. It has a chemo-therapeutic effect on the pneumococcus and its derivatives and as specific bactericidal action that favors the work of the antibodies.

To begin with I repeat this twice daily, having the patient instill a 1 per cent optochin solution every hour during waking hours and apply a 1 per cent optochin and atropine ointment at bed time. Its first advocates advised the simple instillation alone, but Ramsay and others with more experience than I, have found this method more efficacious. He has treated a great many cases with very excellent results.

Shur, in *Klinische Monatschrift of Augen*, reports eight cases cured from the use of optochin. Darier reports good results from the use of optochin in serpiginous ulcers. Kuemmel, in *Muencheuer Medical Wochenschrift* reports 17 cases by practically the methods of Ramsay, with good results in all but one case.

Under this treatment in three or four days the ulcer is cleaned, infiltration is gone from the margins and spreading or undermining stopped. Hypopyon, if any, is soon absorbed. I then reduce the optochin applications to once daily, the instillations to two or three hours during the day and continue my optochin and atropine ointment at bed time, and commence the use of yellow oxide ointment.

I keep these cases bandaged, using a gauze pad only, as a cotton pad is more liable to become soaked with secretions and act as a poultice, which is the thing we want to avoid.

As optochin has no germicidal effect on anything but the pneumococcus, if we have a mixed infection we must get back to our old treatment of cauterization by trichloroacetic acid, phenol or iodine. The optochin solution is not stable, all users advising not to use a solution a week old and Ramsay especially calls attention to the fact that if your ulcer comes to a standstill, or you seem to get a reinfection,

immediately make a new solution. In my experience, and the reports of others, a much less dense scar is left following this treatment.

If this did not control the spreading, I would resort to the actual cautery, always wiping off the eschar, and to the cauterized surface apply optochin as above. If perforation seems imminent in spite of this, I use eserine to relieve tension, and as a last resort do a Saemisch section.

Wickers, in Archives de Ophthalmologie, reports a method (calling it thermotherapy) of 47 cases, by holding the red hot needle of a galvanic cautery close to surface but not touching. Holds it for one minute and repeats two or three times at short intervals. Second treatment rarely needed. He thinks it prevents perforation and causes a thinner scar.

Prince, of Springfield, Ill., in an article in April Ophthalmic Record, describes a method of what he calls "Pasteurization of Corneal Ulcers". Heats an egg shaped electrode red hot in gas flame and holds it close enough to ulcer to get a temperature of 150 degrees. First tests it by holding it near a thermometer to gauge the distance and near his finger while treating. Says pneumococcus killed instantly by temperature of 149 degrees and sterilized at temperature of 132 degrees. And these temperatures not sufficient to destroy the physiology of corneal cells. Reports several cases with great success. I have not tried either, but the idea looks good to me and have ordered Prince's instruments.

I have used sub-conjunctival injections of from normal salt solution to 1-1000 cyanide of mercury, with only moderate success. In two cases, with 1-5000 cyanide, I had such a violent reaction that I have very nearly abandoned it in these highly inflamed eyes.

Dr. Patterson showed a case before the Colorado Ophthalmological Society of severe infection with central ulcer that he thought was saved by repeated injections of cyanide from 1-2000 to 1-1000. Dr. Black, who was present, fully agreed with him. I think I get a better result from the use of dionin.

I have used serums in a few of these cases with some success. If you have a pure infection, I think it is valuable. With the stock mixed serums I have not had much success, and am not at all enthusiastic about them, but it was probably me and not the serums.

Macleish, in Archives of Ophthalmology, reports five cases of keratitis caused by infection from bacillus coli communis, cured by autogenous vaccine made from culture from the urine.

Marple reported a case before Ophthalmic Section N. Y. Academy (May, 1916, Archives) of pneumococcus ulcer cured by using serum in the usual way and in addition to the serum injected same serum instilled into the eye and 5 minims injected subconjunctivally.

Following Darier's plan, I used diphtheritic antitoxin in one very violent serpiginous ulcer and had good success with the eye. As I had also used the actual cautery I am not certain how much effect the serum had on the case.

Wiener of St. Louis, three years ago, read a paper before this section on the use of methylene blue in corneal ulcers, reporting great success. Many others have reported favorable results. It has not been as successful in my hands as the other treatment.

**Keratitis Lagophthalmia** simply requires a protection of the cornea by the lid. This may be done by bandaging, at night alone will sometimes suffice. In more severe cases it must be bandaged all the time or the eye-lids sutured together.

**Keratomalacia** is really only a symptom of a generally exhausting disease, mainly in poorly nourished children. Most of them die. Besides the general treatment, warm moist compresses held on by bandages is all that we can do.

**Neuroparalytic Keratitis** is also treated by a bandage, warm compresses, atropine, and we may try large doses of strychnine, and use electricity.



**Non-Suppurative Keratitis.** Of the superficial forms, *pannus* is the most common and of course is treated by the removal of the trachoma, as the pannus usually disappears when this is done. Ulcers of cornea occur at the lower border of the pannus. Their treatment is not different from other simple ulcers.

Olin reports especially good results from the use of scarlet red 0.5 olive oil qs. and vaseline 10.0. Örtin and Schreiber also report good results from it in latter stages of all corneal ulcer. I have not used it.

If the pannus does not disappear after curing the trachoma, several methods are used. The old operation of periectomy was valuable, but must be done thoroughly. Not only the superficial conjunctival vessels must be removed, but also those in sub-conjunctiva down to the white sclera as well.

I have treated two cases lately with a culture of *bacillus bulgaris*, with very gratifying results. They seem to thrive on this pannus, and literally eat it up. I, of course, only used this after the curing of my trachoma, but in one case especially, of years duration, following the Heisrath-Kuhnt operation, the pannus persisted, but is clearing very rapidly under the treatment with the bulgaris.

**Deep Keratitis.** As we all know, this disease is really but a symptom of a general condition. With the advent of the salvarsan treatment for syphilis we all hoped for great results in the treatment of this class of unfortunates. From my limited experience with it, I have very nearly abandoned it and gotten back to the old line, as I have been able to see but very little benefit from it. The reports of bad effects on the optic nerve have also made me afraid of it.

Storer, of Cleveland, in an article in the *Cleveland Medical Journal*, went into the subject very thoroughly and has gone back to the old line. Ziegler, of Philadelphia, reported a case to the Wills Hospital Ophthalmic Society, which has been treated with salvarsan with no result. He had used enesol in ampules of 1-300 gram, which is salicylarsenate of mercury, with good results. This patient's eyes had been extremely irritable but were becoming quiet and the cornea growing clearer very rapidly. Enesol may be used either intramuscularly or intravenously, but as this is only a new form of mercury it brings us back to the old line.

Weis, of New Orleans, reported at the meeting of the Southern Medical Society last November, fourteen cases, treated with the intravenous injection of 1-8 grain of bichloride of mercury in 10 to 30 c.cs. of water, used every one to four days, with excellent results. I have not used it.

However, Von Szily in the *Klinische Wochenschrift* reports that he has good results from salvarsan, but used 15 to 20 infusions over from 4 to 10 weeks time. Says it makes conditions worse at first, and in a few cases the other eye became infected, but after persistent treatment most of the cases cleared almost entirely, leaving nearly perfect vision.

The reports of all other observers that I have been able to find have practically abandoned any hope of benefit from the salvarsan treatment of deep keratitis. The local treatment in these cases is simply supplemental.

Deep keratitis is very often associated with inflammation of the uvea and must be treated accordingly—dionin and atropine giving us best results. The dionin, in my opinion, is a very valuable treatment, with or without uveitis, after the acute inflammation is out.

I usually treat these cases with dionin for a week, yellow oxide for the next week, and powdered calomel the third week, and then repeat. In this way I only use the dionin one week out of three and the tolerance which was established has been lost by the time I get back to it again. I think in these cases I have gotten very valuable results from sub-conjunctival injections. I see but little difference in this if I use normal salt solutions or cyanide of mercury 1-5000. I am inclined to think that the lymphagogic action is what does the good, and as the normal salt solution is much less painful I generally use it. This has proved much more valuable in my hands in these sub-acute and chronic conditions than in any acute con-

dition. However, I always have my patient well saturated with mercuric and iodides. The dionin, yellow oxide and calomel I keep up for months, often stopping all treatment for a few weeks, and have been able in most of these cases to see the cornea nearly entirely clear and good vision left. Internal treatment, however, must be kept up for years or there will be relapses.

**Dendritic or Malarial Keratitis** is treated first by treating the malaria. The Fuchs method is to cauterize each branch with tincture of iodine. This, with the treatment outlined for simple ulcer, and occasionally the use of holocain, as necessary for pain, will usually control these cases.

In **Marginal or Arthritic Keratitis** irritating drugs and violent caustics should be avoided. Besides the milder local treatments I still cling to the old fashioned salicylates. Also hunting for a source of focal infection.

In **Tubercular Keratitis** besides the general treatment and tuberculin, which we all know, Kaz in *La Clinique Ophthalmique* (Archives, May, 1915) recommends eserine ointment because of the wonderful effect often seen on blepharospasm and on the cornea itself. He thinks benefit due to quieting of the iris with relaxation and better drainage of the infiltrated cornea. The contraction of the pupil enlarges the surface of the iris, unfolds the crypts and opens more broadly the filtration angle, producing better conditions of nutrition and so easier healing of the ulcerated cornea. It is probable that pupil is commonly much dilated in spite of the blepharospasm.

**Phlyctenular, eczematous, scrofulous, or strumous keratitis** is generally found in a strumous diathesis due to many causes, and treatment must be directed to the underlying cause. Good feeding and hygiene; locally, dark glasses, calomel, yellow oxide, will usually effect a cure. Sub-conjunctival injections may be needed. Errors of refraction must also be corrected.

Having nothing new or interesting to offer on the uncommon or mixed forms of keratitis, as described in our text books, so will not mention them.

### Discussion

The entire Section examines a subject, who is placed in front of the window of the meeting room.

**Dr. Buxton**, Oklahoma City, called on for discussion. The literature of superficial keratitis is exceedingly disappointing. In the first place there are many forms of superficial keratitis, and not only that but the treatment recommended covers a multitude of remedies. Mr. Chairman, I especially desire to call attention to one phase only of this paper, the superficial forms of keratitis, the epithelial forms, if you please, the eruptive forms, the dendritic forms. In regard to these superficial forms of keratitis, as was so ably spoken of by Dr. McHenry, you will find our literature abounds in a multitude of various treatments.

My experience in the treatment of phlyctenular keratitis is that the disease itself moves in waves, it becomes better and then worse, and very often we find ourselves concluding that our treatment is doing the work when the fact is that the case is not getting better. My own experience in the use of conjunctival injections, be they mercuric, normal salt solutions, or others, is that the effect is only temporary and that the condition returns in about two months, and you will find the case complaining the same as ever. There is another form of superficial keratitis, the dendritic, which starts from a little ulcer which spreads like the top of a tree over the conjunctiva, in fact the name dendritic means a top of a tree. In Oklahoma I have seen a number of cases of this form of keratitis. Many state that 90 per cent of this form of keratitis is due to malaria. But the large number that I have seen were not due to malaria. I had four cases, two of them this year (illustrating), this being the sclero-corneal margin, a slight ulcer started here and extended across the cornea and formed a shape like this, hence (indicates on chart or diagram)

called it a dumb-bell keratitis, there was a dot of an ulcer here, but the peculiarity of this form was it had no inclination to branch. All of these dendritic forms branch out like your fingers, but on the other hand the history of these cases has been the same so far as time is concerned as other forms of dendritic keratitis. This particular form is evidently due to some organic micro-organism, to some pyogenic germ, or due to some vegetable fungus. This form leaves a little shade of opacity for a long time afterwards. The deep ulcers have not been what has troubled me. The long time these cases continue causes impatience in the patient and too often a traveling from man to man hoping for quick relief; they go from man to man, they go from one to another, and this is one reason why better results are not secured. If you can't cure them in two weeks, they go to the next man and travel about. In this particular form of keratitis I have had some success with the use of tincture of iodine applied to the ulcer head. I believe that of all the things I have used for this superficial keratitis tincture of iodine has given the most satisfactory results, especially after the vesicles have ruptured and you have these tiny ulcerated spots.

**Dr. McHenry, Oklahoma City:** The question would rise in my mind if the improvement was not due to the mercury and iodides. I am a skeptic on the use of salvarsan in keratitis. To get back to the discussion, Drs. Barnes, Herod, and Fullenwider,\* both found a great deal of Morax-Axenfeld infection. I have found much conjunctivitis due to this but I never have seen an ulcer due to Morax-Axenfeld bacillus. I find that I, too, get lazy and do not make a smear in all my cases. I always make one, however, in ulcers that do not heal quickly—the first few days. The form of keratitis as described by Dr. Buxton, I have not seen. It is not a dendritic ulcer, I don't know what to call it. I have always gotten results by the use of malarial treatment and by the cauterization of each branch with iodine. The subconjunctival injection of dionin, as spoken of by Dr. Barnes, I have not used. Neither have I had any experience with the pannus operations that he spoke of Dr. Carey doing. Dr. Fullenwider spoke of the 1-500 bichloride as an application to corneal ulcers. I use this in trachoma, which is getting off the subject a little; have not used it in ulcer. We have a colleague in Oklahoma City who was mulcted in a damage suit for giving a patient a strong solution of bichloride. I do not think there is danger from using it at your office. Dr. Runkle speaks of the iodocyl ointment and the percentage of foreign bodies that become infected after its use. It is a good thing. I, too, have used it but I believe his percentage as I figured a little less show 5 per cent to be about the usual number of infections following removal of all foreign bodies. Dr. Short speaks of the cocaine. You will find in this paper if it is ever printed, and you read it, that the sentence "*I do not use cocaine for pain,*" is written in italics. I have seen two eyes that were absolutely lost by the use of cocaine in my opinion. Both of them came to me with the whole corneal epithelium gone. The history was of a very small ulcer and cocaine given for the pain. In both these cases the eye was lost.

\*A part of this discussion not obtainable

### THE COUNCIL ON PHARMACY AND CHEMISTRY.

In his chairman's address before the Section on Pharmacology, R. A. Hatcher, New York (*Journal A. M. A.*, Nov. 4, 1916), dwells on the duty of the medical profession toward the Council on Pharmacy and Chemistry. Therapeutics was in a condition termed chaotic at the time the Council was formed about eleven years ago, and while the conditions are greatly improved, the advance is incomparably less than it would have been if teachers in medical schools had taken a more serious interest in the work. The early efforts of the Council were devoted largely to disproving the misleading claims of nostrum exploiters but in spite of the exposures made, they are still doing it without any pretense of disputing the work of the Council and even leading medical journals are still carrying their advertisements. Dr. Hatcher speaks plainly to force realization of the need of correcting these conditions.



## ACUTE PYELITIS.\*

W. M. TAYLOR, M. D., Oklahoma City

Pyelitis, or as Kerley speaks of it—pyelocystitis—which is a better name, suggesting the fact that the bladder as well as pelvis of the kidney is usually affected, is a condition which has received but scant attention among pediatricists. Most of the text books mention it only in a casual way.

**Etiology.** In the majority of cases the specific organism producing this condition is the colon bacillus, which is fortunate in a way, for the effect of the *c. b.* is not very virulent. The staphylococcus, streptococcus, gonococcus or the typhoid bacillus may be the cause, and it is in this type of infection in which the damage may extend beyond the pelvis of kidney into its substance, practically destroying it. The same condition may result from the colon bacillus infection in neglected cases.

There are, according to L. Langstein of Berlin, three possible portals of entry viz., through the blood stream, through the lymphatics and through the urinary tract from the external genitals. Some observers claim the extension upwards as the most frequent origin, and to substantiate this theory quote the fact that more girls than boys are affected. On the other hand, those who think that the infection travels through the lymphatics say that the condition is not diagnosed, though present in boys as well as girls. Of course the chance would seem rather obscure that the colon bacillus would gain entrance from without in either case unless there was a lowered resistance furnished by some local or general disease; or, as some one states, by a stagnation of urine in the bladder.

Knowing that cases of pyelitis often follow acute intestinal disorders or chronic constipation leads one to conclude that as a result of the local damage done to the colonic mucous membrane, and that there are lymphatics communicating with the kidneys from the colon, all three sources may play an important part in the production of this inflammation.

Pyelitis occurs as a complication of other diseases.

**Symptoms.** R. G. Gordon separates the cases according to their clinical signs into five groups:

- 1—Symptoms of general feverish disorders.
- 2—Cerebral symptoms.
- 3—Pulmonary symptoms.
- 4—Abdominal symptoms.
- 5—Urinary symptoms.

The symptoms may be, and generally are, less marked and often it is the unexplained temperature which leads to the solution of the problem; all other sources being eliminated, the urine is examined and the cause found there.

To my mind it furnishes a very intricate question to be decided at times, namely, whether we have a cystitis or a pyelocystitis or only a pyelitis. Langston says, "That symptoms indicating a secondary pyelitis resulting from a cystitis are—sensitiveness to pressure over the renal region radiating colicky pains in the neighborhood of the kidneys,—elevation of temperature which is intermittent and of which type reminds us of malarial fever with a feeling of perfect well being during intervals."

The spread of the inflammation to the membrane of the kidneys is recorded by the urine in an increase of albumen; by the appearance of distorted white blood corpuscles, and crenated red blood corpuscles.

In older children there may be even fewer symptoms to indicate the seat of trouble and there may be symptoms of a general, rather than a local, disease such

\*Read in Section on Pediatrics, Oklahoma State Medical Assn., May 10, 1916.

as lassitude, lack of appetite, occasional fever, and again only by examination of urine do we find the source of trouble.

The usual symptoms in early infancy are a sudden rise in temperature, perhaps a chill, but nearly always a temperature of 101-5, with complete intermissions maybe for a day or two, or longer, as in the case I shall report, even for a week at a time.

Pain on urination is not a frequent symptom, sometimes there may be straining after urination if urine is markedly acid.

Wood of Washington mentions the proneness to recurrence of pyelitis even after apparent cure, examination of urine showing a return of the active condition.

The case I shall report was of a girl 2 years old. She came from a town in which malaria was of common occurrence; was breast fed entirely until 14 months old; after that, was on a mixed diet fairly well suited to her age; seemed well till 2 months previous, when mother mentioned the fact that she had chills and fever following an intermittent type, also profuse sweats. Temperature ranged from 101 to 105; remained normal for several days. Widal reaction for typhoid fever was negative.

The absence of Widal and no other reason to be assigned, she was put on quinine, a very frequent procedure when we do not know what else to do. Later an examination of blood was made and few malarial plasmodia reported. No improvement followed the quinine.

**Physical examination.** She was seen two months later. She was very pale, poorly nourished and developed, very irritable. Spleen was not palpable. Ears were normal. She had no rosary. Liver was palpable but only 2 c.m. below the costal border. Heart and lungs and abdomen were normal. Blood showed 70 per cent hemoglobin and 22000 white corpuscles.

**Diagnosis.** The negative Widal test and the leucocytosis ruled out typhoid fever. Malarial fever was ruled out by the leucocytosis, absence of enlargement of the spleen and the therapeutic test by quinine. No evidence of middle ear disease which often produces but few symptoms other than an irregular temperature. After going over the entire body no evidence of a localized infection could be found.

Dr. Sorgatz examined a catheterized specimen of urine, reporting pus cells and many mobile bacteria resembling the colon bacilli. This cleared up the diagnosis promptly, of course, but treatment by the ordinary therapeutic remedies did not so promptly produce a cure as some would lead us to believe.

**Treatment.** The baby was given urotropin, 15 grains daily, with no apparent results. Then citrate of potash was given, one drachm daily, and after a week the symptoms improved but returned at times.

At the suggestion of Dr. Sorgatz, I used autogenous vaccines, beginning with 250,000,000 and increasing at four day intervals. The child steadily improved and gained in weight rapidly and passed from under observation. There is a proneness to recurrence in this condition. The pus and bacteria may be found in the urine for long periods without constitutional symptoms.

Local treatment, as washing out the bladder, is of little value and as Morse says, "Little can be expected from this when the infection involves the whole urinary tract." Theoretically, urotropin should be the sovereign remedy for this condition, as Langston says it is by liberating the formaldehyde in the urine, but it is not.

Potassium citrate in sufficient doses to keep the urine alkaline seems to clear up the condition promptly except in the cases of long standing. Morse suggests that it is well to try the effect of suddenly changing the reaction of the urine every three or four days, which sometimes clears up the urine very quickly. To do this, benzoic acid in from 1 to 3 grains three times daily may be used.

The autogenous vaccines deserve a trial when possible to obtain them, if the

case is a persistent one or one of long standing. Smith of Boston says, "There is one form of treatment against which there is no dissenting voice, and that is the administration of large quantities of fluid". Further than this there is no specific treatment. In many of the acute cases the patients get well untreated.

### COLONIC ULCERATION, ITS OPERATIVE TREATMENT.\*

G. A. WALL, M. D., Tulsa, Oklahoma

The value of complete rest in the treatment of any inflamed organ has been recognized by the profession for many years, but it has not been practiced fully enough by it. No one would, for a minute, fail to put an infected arm or leg at rest at once, and where is the doctor who would neglect the prompt splinting of a broken bone? Then why should we not apply the same rule of treatment to the inflammatory conditions of the abdominal viscera, more frequently than we do? Our cases of peritonitis we endeavor to relieve by absolute rest, as nearly as it can be obtained, by inhibiting peristalsis. Alonzo Clark, years ago, recognized the value of rest in the treatment of abdominal inflammation, and endeavored to produce this condition by the use of full doses of opium; while his method of treatment was more or less empirical, still in its day it saved many lives which would have been otherwise lost, and even now, I am not fully prepared to give it up, when my judgment tells me to use it. More recently Ochsner, in his starvation treatment, aims to the end of obtaining intestinal rest by withholding all food, even water, for the reason that it increases peristalsis. It is a well established fact, that during a complete fast, rest prevails throughout the whole intestinal tract, whereas digestion leads to peristaltic movements of the small intestines. The colon of the healthy individual exhibits rhythmic propulsive waves, which impel the feces onward for a considerable distance and then cease for several seconds, and it is claimed that three or four such waves serve to drive the feces through the whole large bowel. These movements, in the healthy bowel, are without pain, but just as soon as the mucosa becomes inflamed any kind of food passing over it produces an increased and painful peristalsis. Complete physiological rest of certain portions of the large bowel, usually the lower sigmoid and rectum, as accomplished by left side colostomies of well known worth, in acute and late obstructions and as a protective measure, where medical treatment is contemplated.

We all recognize the great value of diverting the flow of fecal matter away from the rectum, in malignancy and ulcerative conditions, by means of a colostomy. If this be true in pathological conditions of the lower part of the large bowel, does not same apply to conditions higher up? To that end I am going to call your attention to an operation, practiced by Dr. John Young Brown, which seems to be the most logical one for ulcerative conditions of the colon. We are all familiar with the literature of short circuiting and exclusion operations, as brought out by Lane, and the great enthusiasm which they invoked at the time, and these operations no doubt have value in properly selected cases. However, in the operation of Lane, if it does not fulfill its purpose it leaves the patient in an almost deplorable condition, and remedial measures are very difficult, and at times impossible. For instance, who could restore the intestinal tract of one who has a complete colectomy done? Again, let us suppose that the condition for which it was done was a benign one, and the colon had been entirely removed, wouldn't we have done the patient a great deal of harm, and no good?

Complete physiological rest of the whole lower bowel in ulcerative conditions is the only proper method of treatment and the operation which does that, and still requires no sacrifice of intestine, is the one of choice. Again, after the operation has fulfilled its mission, we should be able to restore the bowel to the condition nature intended it to be in. One of the principles upon which modern surgery is

\*Read before the Northeast Medical Society at Claremore, November 2, 1916.



based, and upon which it has made such wonderful progress, has been the recognition of the one great principle—rest. Take, for instance, duodenal and gastric ulcers: can anyone deny the demonstrated value of gastroenterostomy in these cases? In gallstone colic, it has been demonstrated time again that washing out the stomach and complete abstinence from food, or even water, will cause a cessation of the pain, and the reason is, because we inhibit duodenal peristalsis, thereby preventing irritation to the gallbladder and ducts, and produce a condition of absolute quietude in the region involved in the pathological condition. The type of intestinal diseases in which it has been found that surgical rest has been of value are these:

- (1) Mucous colitis with obstruction.
- (2) Ulcerative colitis, amoebic, bacillary, tubercular, etc.

It has been shown, according to Brown, that in the majority of cases of mucous colitis, both the symptoms and the X-ray findings give marked evidence of interference with the fecal flow, with the accompanying toxemia associated with chronic intestinal stasis. The cecum is generally found in the pelvis, dilated and surrounded by a well defined membrane. Angulations are found at the hepatic and splenic flexures, and the transverse colon sags almost to the pelvic brim, even with the patient in the Trendelenberg position. In the past many of these cases were greatly benefited by the Weir Mitchell treatment, combined with medical assistance. This was the type of case in which Lane advocated the removal of the entire large bowel, down to the sigmoid; later, he found the operation too radical and then began the short circuiting operation. Other operations have been devised, notably one by Coffey, in which he does an elaborate fixation of the intestine, but the consensus of surgical opinion is, that they are spectacular but not remedial. Many of the types of colonic infection respond to medical treatment and colonic lavage, but the severer types are now regarded as surgical.

In the past, three procedures were utilized for the treatment: viz, appendicostomy, cecostomy and ileosigmoidostomy. All these are objectionable. Appendicostomy and cecostomy only permit of colonic irrigation, and as fast as the colon is flushed it fills up with fecal matter from the small bowel, hence the ulcerative area cannot be kept clean. The short circuiting operation is objectionable because the lower pelvic colon is usually involved in the colitis and it is practically impossible to anastomose distal to the diseased sigmoid. The advantage of the operation, as perfected by John Young Brown, will be readily seen, when applied to the treatment of ulcerative conditions of the colon. It has all the advantages of left-sided colostomy, and none of its objectionable features. It permits of a free drainage of the small intestine, and provides for rest and irrigation of the whole colon. A left-sided anus is easily made, but any one who has attempted to close one will appreciate the difficulty. If the condition be one of malignancy, the right-side anus does more good than the left-sided one; if the diagnosis is wrong, the right-side anus can be more easily and safely closed than can the other. Another great advantage is, that the contents of the small bowel, after a few days, do not possess the awful stench that the stagnant and filthy fecal matter of the lower colon and rectum do, and the ileal contents do not irritate the skin, as do those from the colon.

From all these points the operation of choice and the one which the writer is now doing, is ileostomy according to Brown. This is a comparatively old operation, having been done some twenty years ago by an Italian. Lynch of New York began doing it four years ago for infected colons, and reports some brilliant results. Dr. J. Shelton Horsley speaks in highest praise of the operation, citing one case of multiple papillomas of the colon, which ulcerated and were discharging blood and mucus, which responded promptly to the operation. As these lines are being written, it has struck the writer that it might be a valuable procedure in the severe ileocolitis in children, knowing as we do that in many instances the grave lesions in this disease may be in the colon. There is very little, if any, shock to the operation, and it can be done in fifteen minutes. Recently the writer did this operation for

colonic ulceration, in a patient with a red blood count of only 1,800,000, and a hemoglobin per cent of 65. The patient had had severe and repeated hemorrhages, and was quite exsanguinated, but she stood the operation without the least shock, notwithstanding her resisting power was very low. The one great advantage of ileostomy lies in the fact that the whole colon can be kept clean, and when it has performed its duty, and the disease is cured, we can restore the continuity of the intestinal tract by the very simple operation of anastomosis.

### SOME OF THE COMPLICATIONS AND SEQUELAE OF LOBAR PNEUMONIA.\*

T. H. McCARLEY, M. D., McAlester, Okla.

We now know that not only the lungs may be the subject of pneumococcic infection but that almost every other organ and tissue may be secondarily infected. Hence we no longer regard as unusual, clinical reports of pneumococcic appendicitis, arthritis, nephritis, cholecystitis, etc. It is evidently not feasible to discuss, in a short paper, all such complications and sequelae. I have chosen to refer to four, which are comparatively frequent in occurrence, and to measures indicated for their amelioration and relief. I am aware that much may be done in the way of management of a case of pneumonia toward preventing these unfortunate occurrences. However, we all meet them and their early diagnosis and treatment are important. I refer to cardio-vascular complications, acute pulmonary oedema, empyema, and acidosis.

First, Cardio-vascular Complications: The heart is usually our first thought in every case of pneumonia. The aphorism of the older writers, "In pneumonia, watch the pulse," was succeeded by "In pneumonia listen to the heart," and this has been supplemented by the observation, "A pressure much below normal in pneumonia is unfavorable, any great fall is ominous." In a long series of necropsies, in which pneumonia was the cause of death, some degree of myo-cardial degeneration was evident in every case. A more or less rapidly developing embarrassment of the circulation may have either a mechanical or an infectious process as its cause. It is mechanical in case the pulmonary consolidation has become so extensive that the right heart is unable to maintain its increased burden. We expect the pulmonic second sound to be accentuated. By means of frequent auscultation of the cardiac area we detect a beginning lessening in the intensity of this accentuation, which is a warning that prompt and proper stimulation is demanded. A failing heart resulting from infection probably means bacteremia of increasing virulence or myo-cardial degeneration. Here, too, we turn to our most trustworthy stimulants. To those of you who are in the habit of confining your stimulation to strychnine, whiskey, digitalis and ammonia, I suggest that you do not give any of them, unless it be ammonia which can do no harm, as a routine measure. Remember camphor, which administered hypodermically in two or three grain doses in sterile olive oil, may be repeated at short intervals and is very valuable. Ouabain, a glucoside of strophanthus, 1-2 gm., to be withheld for emergency and repeated at only twenty-four or forty-eight hour intervals, if at all, seems to be superior to anything else at our command.

Second, Acute Pulmonary Oedema: The exact pathology of pulmonary oedema as a complication of many disease processes is still sub judice. However, we do know that we have, secondary to infections of the lungs, the exudation of a highly albuminous fluid, usually somewhat hemorrhagic, not only into the interstitial tissue, but also into the alveoli themselves. Moreover the acute, active congestion of pneumonia may produce an acute oedema without signs of consolidation. In this unfortunate class of cases the lung is promptly flooded. Dyspnoea is marked and the sputum is thin, bloody and frothy. These patients really drown themselves

\*Read in Section on General Medicine, Annual Meeting, Oklahoma City, May 10, 1916.

in their own transudate and often die during the first thirty-six hours of the disease in spite of any known treatment. When face to face with such threatening conditions, venesection is positively indicated, more particularly if the patient is plethoric. To this may be added mustard foot baths, the hypodermic use of atropine and other cardiac stimulants. But as Dr. Elsner aptly states, "These methods are simply time saving in their effects; they make it possible to bridge the patient over a critical period; for the toxemia being short lived, we may on rare occasions find ourselves transported to a clearer and more favorable atmosphere."

**Third, Empyema:** We have all had experiences similar to the following. Our patient has passed the crisis of pneumonia. His temperature is normal for two or three days and then he has a little temperature, which is higher on each succeeding day. Examination of the chest reveals somewhere an area that is dull or flat, with absence of or diminished breath sounds, and with voice sounds transmitted poorly or not at all. We think of unresolved pneumonia, pleural thickening, and empyema. Unresolved pneumonia is mostly a myth. The leucocyte count being higher in empyema than in pleural thickening, helps to differentiate these two. We practice the niceties of auscultation, percussion, and palpation, remember Bacelli's sign and think we have made a diagnosis. In passing, I wish to insert that though there may be physicians sufficiently practiced and skillful and with a musical ear sufficiently sensitive to differentiate in every instance the dull note of a consolidated lung, and the flat note of an empyema; I have not met such an one in consultation over a case of this type. In nine cases out of ten it is a case of empyema, so why delay inserting an aspirating needle and obtaining positive proof. As soon as you find pus it is time for a drainage operation. My excuse for calling your attention to this well-known sequela is two-fold. The diagnosis is often delayed until the quantity of pus is enormous, sometimes the true condition being recognized only after rupture into a bronchus. Again, the tendency is all too prevalent to attempt to effect a cure by aspiration.

**Fourth, Acidosis:** This is a complication no more of pneumonia than of other acute infections accompanied by high fever. It was not many years ago that we heard nothing of the subject of acidosis except in connection with diabetes and other wasting diseases of long duration. It is now argued that frequently the subject of an acute infectious disease, particularly if he be obese, succumbs, not to the disease or its toxin per se, but to the effects of acidosis. In the process of rapid katabolism incident to high fever, the fat of the body is more rapidly oxidized than other tissues, being split up into the triatomic glycerol, liberating oleic, palmitic, and stearic acids into the blood stream. This type of acidosis causes a myocardial inflammation and weakness. Proper diet is the all important factor in its prevention. Milk and egg albumen are not a suitable diet, but should be supplemented by a liberal allowance of carbohydrates. If for any reason this is not possible, or if the temperature is high over a long period of time, an alkali, as sodium bicarbonate, should be exhibited by mouth. In some instances it will be advisable to administer sodium bicarbonate and glucose by rectum, the former to maintain the alkalinity of the blood, and the latter, which is rapidly absorbed by the rectal mucosa, to supply fuel for oxidation, that the fat may be spared as much as possible.

### Discussion

**Dr. Lea A. Riely, Oklahoma City:** This is an excellent paper and I only wish to speak of one point: that is, Acidosis in pneumonia.

Fat people do not bear the brunt of a sustained high fever because the fatty tissues are so easily broken up into the three fatty acids and glycerol, thus liberating the acids and producing a cloudy swelling of the heart muscle with its attendant weakness.

The acidosis is also increased by the fasting which is so common in bad cases of pneumonia. Hence we find wonderful effects by the use of bicarbonate of soda in these cases.



Acidosis is easily measured by Marriatt apparatus with expired alveolar air to the extent of elimination, is easily told by adding 10 c.c. of urine to 1 c.c. of solution of nitroprusside of soda, then a few drops of glacial acetic acid and overlay with aqua ammonia fortior, when a purple ring will appear at the junction of ammonia and urine.

## TUMORS OF THE TESTICLE.\*

D. D. PAULUS, M. D.

House Physician Wesley Hospital, Oklahoma City, Okla.  
Ex-Intern Cook County and Chicago Lying-in Hospitals, Chicago, Ill.

W. H. BAILEY, A. B., M. D.

Pathologist to Wesley Hospital, Oklahoma City, Okla.

Tumors of the testicle proper, though comparatively rare, warrant the attention of every physician because of their great malignancy and almost certain destruction of life unless early and radical removal of same is effected. The pathological classification of these tumors has, up to recent years, been very confusing, and it is only recently through the masterly study of Chevassu,<sup>1</sup> and of Ewing, that it has been placed on anything like a clear basis. Ewing,<sup>2</sup> in 1912, gave the first convincing and lucid explanation of these tumors, grouping them all into one great class of teratoma, or derivatives—other tumors like pure cell fibroma, adenoma and lympho-sarcoma, or pure cell sarcoma, do occur but are so infrequent as to be of no clinical importance.

So that according to the newer classification all the various types of so-called sarcoma or carcinoma are not sarcoma at all but are of epithelial or of teratomatous origin. These findings have been confirmed by Wilson and others. Clinically then, all primary new growths of the testicle are teratomatous in origin and have two main types, either pure round cell embryonal carcinoma or simple or complex teratoma.

Whatever view pathologists may take of the structural characteristics of these tumors, the surgeon never forgets the grim reality that practically all of these tumors rapidly destroy life, and the rapidity and extent of the lymph gland infection is one of the most prominent clinical features. As a general rule, metastasis in carcinoma occurs through the lymph channels, and in sarcoma through the blood stream, but contrary to this general rule, the malignant tumors of the testicle spread by way of the lymphatics and but rarely through the blood stream. Up to recent years it was thought that metastasis first took place in the inguinal lymph glands, but more recently through the experimental work of Most,<sup>3</sup> it has been definitely determined that the primary lymph glands into which the testicles drain are located retroperitoneally, numbering four or five on each side. The glands for the right testicle lie in the loose adipose tissue on the vena cava, between it and the aorta, and those for the left, to the side of the aorta. Not infrequently a gland is found in the region where the ureter crosses the iliac vessels, and occasionally there are glands at bifurcation of aorta. Secondary glands lie along the internal and external iliac vessels, deeply between vena cava and aorta. In his exhaustive study, Most found no barrier between the testicle and the thoracic duct except these lumbar nodes, so that secondary glandular metastasis quickly occur and general invasion of other organs is not uncommon.

- (1) Chevassu, Maurice: *Tumeurs du Testicule*, thesis. Paris, 1906.
- (2) Ewing, J.: *Teratoma Testes*, Proc. N. Y. Path. Soc., 1909-1910.  
New Series IX., 83; *Teratoma Testes and Its Derivatives*, Surg., Gynec. and Obst., 1911, XII., 230.
- (3) Most: *Ueber die Lymphgefäße und Lymphdrüsen des Hodens*, Arch. f. Anat. u. Entwicklungsgesch., 1899, p. 113.

\*Read before the Wesley Hospital Clinical Society, October, 1916.

However, dissemination may occur or be brought about by blood stream, for it not infrequently happens that secondary deposits or nodules are found in the lungs or other viscera. Not infrequently metastasis may occur in the lungs long before enlargement of the testicle gives the patient any particular worry, and the patient may be brought to the physician on account of lung condition, the primary cause remaining undiscovered unless diligently sought for. An X-ray examination will, however, quickly be decisive. Sarcomatous metastasis in the lungs give characteristic round ball-like shadows, generally near the hilum of the lung, while carcinoma shows finger-like projections in the hilus.

Not infrequently metastasis takes place in long bones, especially the humerus and femur, and the patient comes to the physician on account of fracture which on

CHART No. 1

No.	Age	Side	Duration	Metastasis	Operation	Microscopic	Course	Result	Wassermann	Lungs
1	55	Rt.	4 Mo	No	Removal	L. R. C.	?	Imp.	Neg.	No
2	31	Rt.	3 Yr	No	"	"	?	"	"	"
3	51	Left	6 Mo	Lft. Ing. Cervical	"	Mixed	13 Mo	Death	"	"
4	37	"	15 Yr	Ing. Glands	"	L. R. C.	15 Yr 1 Mo	"	"	X-ray Positive
5	38	"	1 Yr	Humerus	"	"	13 1-2 Mo	"	"	No
6	29	"	1 Yr	Ing. Lft.	None	Teratoma	11 Yrs. ?	Same	0	No
7	32	Rt.	4 Mo	No	Removed	S. R. C.	5 Mo 3 Wk	Death	0	0
8	14	Left	3 Yr	Lft. Ing.	"	"	?	Imp.	Neg.	0
9	30	"	3 Mo	No	"	Teratoma	?	Imp.	"	0
10	23	Rt.	18 Mo	Rt. Chest Wall	None	"	18 1-2 Mo	Death	"	No
11	30	Left	6 Wk	Lft. Ing.	Refused	L. R. C.	?	Same	0	0
12	55	"	3 Yr	2 Wk	None	Round C	3 Yr 2 Mo	Death	0	0
13	28	Both	4 Mo	Lungs	None	S. R. C.	4 1-2 Mo	"	0	X-ray Positive
14	49	Left	3 Yr	No	Removal	Teratoma	?	Imp.	0	0
15	52	Rt.	3 Yr	No	"	"	?	Imp.	0	No
16	65	Rt.	2 Yr	No	"	"	?	Imp.	0	0
17	66	Left	6 Mo	No	"	S. R. C.	?	Imp.	0	0

## REMARKS.

1. Ten months later testicle became involved. Removed. Left hospital improved.
2. Patient not heard of since he left hospital.
3. No autopsy allowed.
4. Suddenly grew larger three weeks before entrance. Autopsy showed Sarcoma of left testicle, Metastasis Mediastinum, Ing., Retro-Peritoneal, Cervical Glands, Rt. Lung and Rt. Humerus.
5. Ten years after operation right testicle became involved, and nine months later, Rt. Ing. Glands.
6. Patient, however, refused operation.
7. Metastasis in upper end of wound three weeks after operation. Patient died with Bilateral Broncho-Pneumonia. Autopsy.
8. Patient not heard of since operation.
9. Tumor size of hen's egg at time of operation.
10. Autopsy; right testicle involved. Metastasis in liver, prostate, mesenteric, retro-peritoneal, cervical glands and 5, 6, 7, 8, 9, 10th ribs.
11. Patient would not consent to operation.
12. Fractured humerus seven weeks before entrance. Autopsy showed left testicle involved. Metastasis retro-peritoneal glands and right humerus, 2, 3, 4, ribs and spine.
13. See report below.
14. Eight months later right testicle became involved. Removed. Left hospital improved. In three weeks attained three times normal size.
15. Operation showed a large tumor mass irregular in outline, with nodular masses size of hen's egg.
16. Patient well and no metastasis seven months after operation.
17. No recurrence six months after operation.

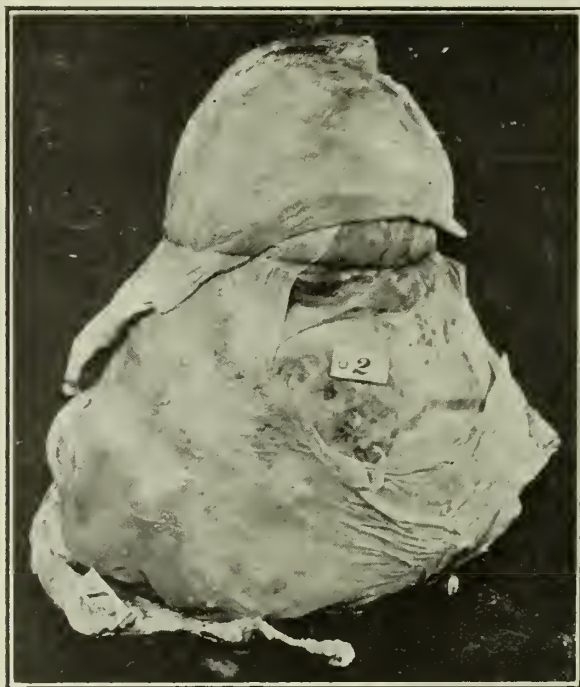


Fig. 1. Round-celled Sarcoma of Testis.  
(1) Remains of epididymis. (2) Tumor tissue.

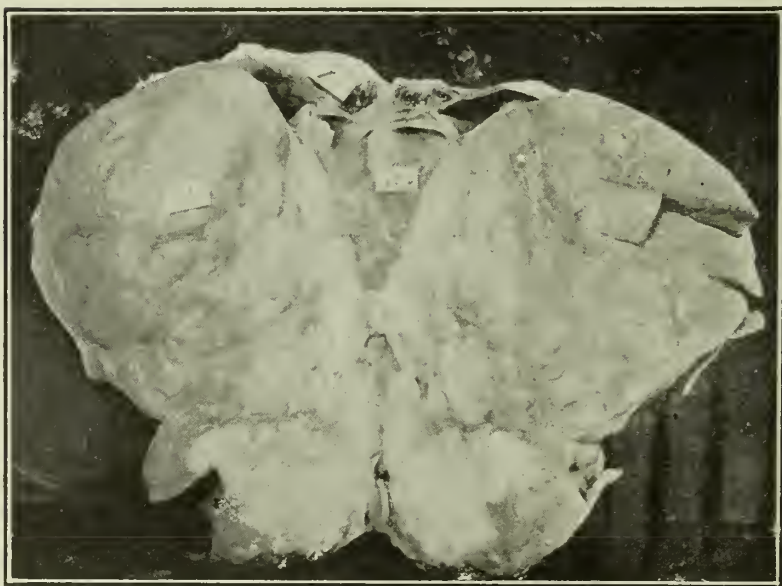


Fig. 2. Round-celled Sarcoma of Testis.  
(1) Remains of epididymis. (2) Sarcoma tissue. (3) Remains of testis.



closer observation is found to be a pathologic fracture. An X-ray examination of broken bone with search for primary focus will reveal the true condition.

Our observations consist of fifteen cases occurring in the Cook County Hospital Chicago, during the past five years, and two cases occurring in the Clinic of Dr. A. L. Blesh, at Wesley Hospital, Oklahoma City, Oklahoma, during past year. The average age of the patients was 38 years; the youngest 14 and the oldest 66. In our series, the primary growth started on the left side in nine cases, and on the right side in five cases. In three cases the disease started on one side, then later appeared in the other testicle, showing that this condition is not so rare as thought by Hutchinson,<sup>4</sup> who reported a case in a man aged 70. The following cases will illustrate:

**Case 1.** In this case the primary growth started in the right testicle, which was removed. Patient had no further manifestations of the disease until ten months later, when the same condition appeared in the left testicle.

**Case 6.** This man had his left testicle removed, which on examination proved to be a teratoma. No recurrence, yet ten years afterwards he developed a similar condition in the right testicle. He came into the hospital eleven months after the growth had started and eight months after metastasis had occurred in the inguinal glands, section of which showed a malignant growth but patient refused operation, as he would sooner preserve his sex distinction than take chances for a possible cure. He left the hospital and failed to return for observation.

**Case 14.** This man had a tumor of left testicle the size of a large hen's egg of three years' duration. This was removed and proved to be a teratoma. Eight months after operation, he returned with the same growth in the right testicle which he said started to enlarge three weeks before entrance to the hospital. Examination showed a tumor the size of a small orange. The peculiarity of the last case is the slow steady growth of the primary tumor and the rapid growth of the secondary process which had attained three times its normal size in three weeks.

**Case 12.** The text-book statement of the frequency of malignancy in undescended testicles is not borne out by our series, only one case occurring.

For the past three months patient complained of pain in left side; for past week has noted tumor mass on that side; lost 40 pounds, entered hospital, complained of lung symptoms. X-ray 526, 458, positive sarcoma metastasis. Patient died two weeks later, course four and one-half months. Autopsy, bilateral undescended testicle retroperitoneal sarcoma of both testicles. Metastasis root of left lung. Broncho-pneumonia; erosion of lumbar vertebra due to tumor mass.

This case is rather interesting in that both undescended testicles were affected at the same time. Dissemination must have occurred through the blood stream as shown by the autopsy findings of metastatic sarcoma in the root of the left lung. What happens in these cases is this: A part of the tumor mass or cells breaks into the veins and is carried by the vena cava to the right side of the heart, then to the lungs. It may lodge here with resulting metastatic lesion or be carried back to the left side of the heart out into the general arterial system to lodge in any portion of the body.

Not infrequently these tumors grow very slowly for quite an extensive period of time, then suddenly commence to grow quite rapidly, which brings patient to a physician.

Case 6 illustrates this. The patient had gradual enlargement of the left testicle of fifteen years' duration which in that time had reached the size of a large hen's egg. Three weeks before entrance the growth suddenly became much more rapid and had attained the size of an orange at the time of admittance to the hospital.

The enormous size to which these tumors may grow is shown by the following cases which occurred in Dr. Blesh's clinic at Wesley Hospital, Oklahoma City:

(4) Hutchinson: Transactions Path. Soc., 1889, XL, 193.

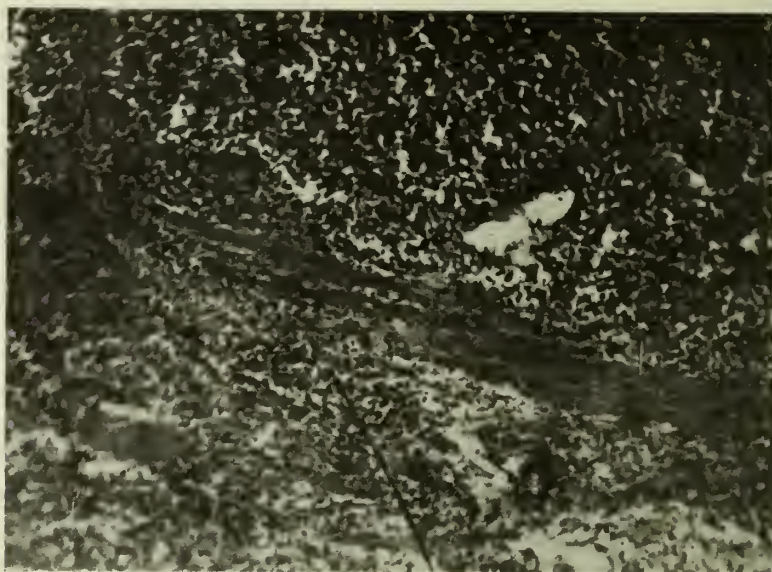


Fig. 3. Round-celled Sarcoma of Testis, showing sarcoma cells and fibrous stroma.

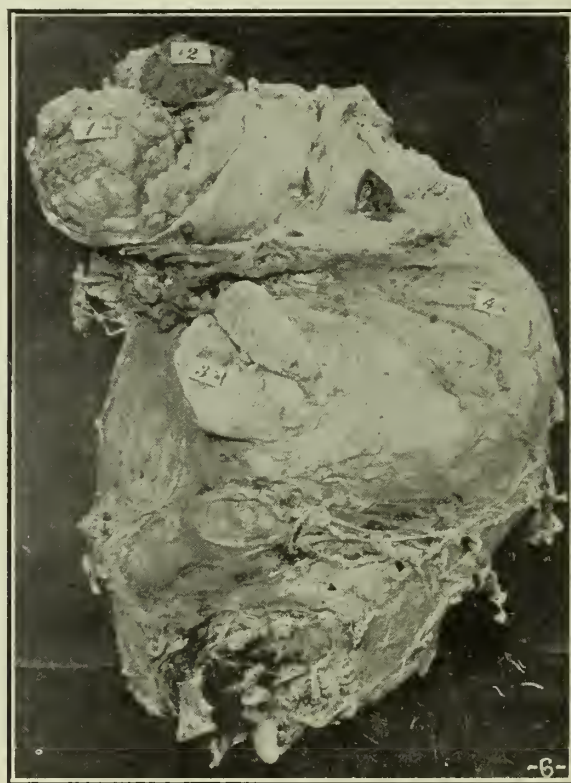


Fig. 4. (1) Fibrous area. (2) Remains of testis. (3) Fatty area. (4) Cartilaginous nodule.

**Case No. 1.** Mr. F. G——, G, Oklahoma. March 2nd, 1916. Age 66.

**Family History.**—Negative.

**Previous Illness.**—Health good up to the present trouble except for a left inguinal hernia for the past twenty-five years.

**Present Trouble.**—In August, 1915, he first noticed a slight enlargement of the left testicle. Pain was very slight, although he had a dull heavy feeling in the affected testicle. The hernia does not come down into the scrotum any more. The entire scrotum is filled by the tumor mass, size of two fists.

**Physical Findings.**—Emaciated old man, apparently not acutely ill. The findings are entirely negative except for a left inguinal hernia and a large mass in the scrotum more pronounced on the left side. The mass is hard, slightly irregular, the size of a large grape fruit. The inguinal glands are not enlarged.

**Laboratory Findings.**—Urine negative. W. B. C., 10,600.

**Clinical Diagnosis.**—Left inguinal hernia. Tumor of the left testicle, size of a large grape fruit; probably malignant.

**Operation.**—Left herniotomy and orchidectomy.

**Result.**—Patient left the hospital in good condition. No recurrence after six months.

**Pathologic Report.**—The gross appearance of the tumor (see fig. 1) was that of a solid pear-shaped, dark-bluish mass, weighing 350 grams, and measuring 12 cm. long and 7 cm. in diameter. The outer surface was smooth, but irregular. There was a fibrous capsule around the entire mass. The tissue cut with an even but slight resistance. The cut surface was smooth and moist, but did not bleed. At one pole (see fig. 2) there was a small oval cystic area about the size of a large marble, which was filled with a gelatinous mass. Above this was a small area that appeared to be the cross section of blood vessels. These two areas are probably all that is left of the testicle proper. The rest of the tumor was a homogeneous mass of about the consistency of liver tissue.

The microscopic appearance of this tumor (see fig. 3) tissue was that of a round-celled sarcoma; the cells being collected in bunches without any definite arrangement, and only here and there small strands of fibrous tissue being visible. The blood vessels through the mass are fairly numerous, but of small size.

**Case No. 2.**—Mr. ——, of P, Oklahoma, March 18, 1916. Age 65.

**Family History.**—Father died of cancer of the temporal region, at the age of 68. Otherwise negative.

**Previous Illness.**—Strong, healthy childhood. No continuous fever. No stomach trouble.

**Personal History.**—Denies venereal infection.

**Present Illness.**—Two years ago the patient first noticed a gradual enlargement of the right testicle. Since then the growth has been steadily progressive, until now it involves the entire right side of the scrotum. When the growth first commenced, he had slight dragging pain in the right testicle, but had not had any for the last year. Never gives any difficulty except for difficulty in walking, due to the large mass. Bowels are regular—appetite good; otherwise in perfect health. No loss of weight.

**Physical Examination.**—Was negative. No adenopathy. An enormous enlargement of the right testicle the size of a very large grape fruit, nodular in character. The scrotal wall was attached to parts of the tumor mass. No inguinal gland enlargement.

**Diagnosis.**—Sarcoma of the testicle.

**Operation.**—Right orchidectomy.



**Pathologic Report.**—The specimen was a large irregular egg-shaped mass, 20 cm. in longest diameter and 12 cm. in the shortest diameter. It weighed 1500 gms. The outer surface (see fig. 4) was irregular and was composed of numerous nodules of varying degree of hardness. Some were hard and cartilaginous; others were soft and gelatinous. On section the tissue was generally very tough and resistant. Many of the areas cut showed calcareous deposits. The inside of the tumor (see fig. 5) was seen to be made up of many cystic areas surrounded by deposits of calcareous matter. Some of the cysts contained a gelatinous substance; others appeared



Fig. 5. (1) Fibrous area. (2) Cartilaginous area. (3) Fatty area (4) Remains of testis.

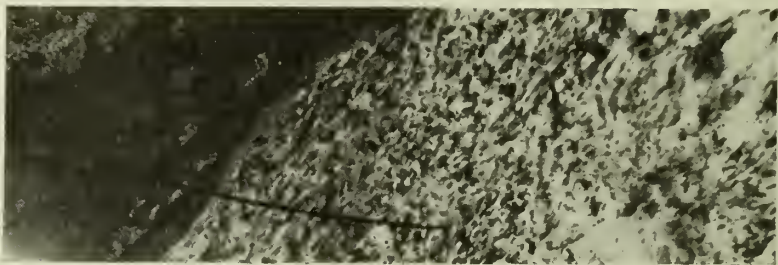


Fig. 6. Chondro-Sarcoma of Testis, showing calcareous, sarcomatous and cartilaginous tissue.

empty. There were four main types of tissue found: The bone and cartilage areas, the fibrous areas, the fatty tissue, and at one pole of the tumor there was a very soft, friable tissue which appeared to be the remains of the testicle proper. The microscopic picture (see fig. 6) of each of these areas was, of course, different. The calcareous areas showed a sarcomatous ground work with the addition of bone and cartilage tissue. The fibrous area showed much sarcomatous tissue. The remains of the testicle was so much degenerated that its structure could not be definitely

made out, but the larger part of it appeared to be made up of the remains of the seminiferous tubules. The whole tumor must be considered a teratoma of the testis, in which the sarcomatous element predominates.

Of these 17 cases, 9 showed definite metastasis at time of entrance to the hospital. Of these 9 cases, 8 were operated upon and one refused operation. Of the operative cases there were 7 deaths due to metastasis from several weeks to several months after operation except one who had recurrence of tumor in operative wound and died of broncho-pneumonia three weeks later.

In none of these cases were the lumbar lymph glands removed as has been recommended by some French and American surgeons. Operation merely consisted of simple orchidectomy with removal of inguinal lymph glands. That the radical removal of lumbar lymph glands is advisable in carefully selected cases no one can dispute; but the surgeon must carefully weigh all the evidence of metastasis, and whether condition of the patient will permit of such a radical procedure.

Certainly, if there is any evidence of metastasis in lumbar lymph nodes or other organs before operation, very little hope of cure can be expected and such a procedure would be absolutely contra-indicated. The *keynote* of the whole situation is this:

1. Early diagnosis is the all-important essential, as in all malignant tumors.
2. Consider all tumors of testicle malignant until proven otherwise.
3. Remember that in the great majority of cases metastasis takes place early, and that the lumbar glands are the first to be involved.
4. To procrastinate in these cases is to sign the patient's death warrant.

### INFECTIOUS DISEASES.

F. P. Gay, Berkeley, Calif. (*Journal A. M. A.*, Oct. 28, 1916), in his chairman's address before the Section of Pathology at the last meeting of the American Medical Association, holds that the experimental study of the infectious diseases as a field of investigation is the most promising one to the pathologist. Virchow, he says, had a broader conception of the scope and possibilities of pathology than has been held by those that have followed him. While he is called the "father of cellular pathology," he was keenly aware that the logical goal of pathology is the study of disordered function. The residual aspects of disease have, Gay holds, been overemphasized during the last sixty years. We have overestimated structure and have tried too much to reason back from effect to cause. The successful experimental study of the infectious diseases has been made possible largely through the science of bacteriology, and many even of these disorders, even fatal, could not produce marked changes in the fixed tissues, and what structural changes occur are often, at best, no certain index of the conflict that has taken place in the body. When of late years some of the younger pathologists have turned to experimental fields, they have naturally chosen the diseases which have been impressed on their minds during their morphologic training, the chronic or metabolic diseases. Their problems, he says, do not appeal to him as timely ones, and the experimental study of the infectious diseases is still the greater field of promise for the investigating pathologist. He gives an estimate, made by himself, of certain numerical relations between infectious and noninfectious disorders. What constitutes a disease entity may have sometimes to be arbitrarily made, and there is sometimes difficulty in estimating whether or not a parasitic cause is absolutely acceptable. In spite of these chances of error, he offers his findings as worth considering. Three hundred and sixty-nine separate sideases were distinguished, and 144 (39 per cent.) were recognized as due to infectious agents alone; another 30 are at least in part infectious in origin, and fourteen more are probably so. The total of the infectious diseases is 52 per cent., and they were the cause of 40 per cent. of all the deaths in California directly or indirectly in the year 1911. They today afford the problems of greatest interest, many of which remain to be solved.

## REPORT OF LARGE PERFORATING ULCER OF ANTERIOR WALLS OF STOMACH.

W. H. LIVERMORE, M. D.

Surgeon To Chickasha Hospital, Chickasha, Okla.

On account of the magnitude of the perforation, I wish to report a case of chronic perforation of the stomach. The patient was referred to me by Dr. P. J. Hampton, of Rush Springs, Oklahoma, December 13, 1916. Age 55. Emaciation marked. Could not walk alone. He gave a history of indigestion lasting for twenty years. Had never been incapacitated from work until the past month. Never vomited blood or food. Had never seen blood in stools but had noticed stools very black at times.

Examination of stools showed occult blood. No tumor could be palpated in abdomen. Tenderness marked in left epigastrium, two inches to left of median line, and at border of ribs. Exploratory operation was advised and accepted. The



stomach was found firmly adherent to the under surface of left lobe of liver. Pylorus free. Moderate dilation. On separating stomach from liver an opening into the stomach, four by three inches, was found on anterior surface. The edges of this opening were thickened and friable. The lymph glands of lesser curvature were moderately enlarged. The surface of the liver exposed to stomach contents was of a grayish color and very fibrous.

A complete gastrectomy was performed, being careful to get all lymphatic glands of both chains. A flap from greater curvature was left attached to oesophagus and used to make a gut three inches long to which the duodenum was anastomosed end to end. Abdomen closed with soft rubber drains in place.

The accompanying picture will give a fair conception of the perforation.

The patient made a smooth operative recovery and rapidly gained strength and flesh. Was able to walk from hospital to auto and from auto to train sixteen days after operation.

He reported feeling fine and gaining strength rapidly January 12, 1917.



## THE PROCEEDINGS OF ST. ANTHONY'S CLINICAL SOCIETY.

DR. D. D. McHENRY, Pres. DR. L. J. MOORMAN, Secy.

December 18, 1916.

**Dr. L. J. Moorman**, Oklahoma City, presented the following case:

A man, 52 years of age; occupation, stone cutter; widowed. Family history negative, except that one brother and one uncle had tuberculosis. Personal history negative with the following exceptions: Married about thirty years ago and lived with wife about five years; two children in good health; wife had no miscarriages. Used alcohol to excess until recently. Had gonorrhea about twenty years ago, good recovery. Twenty-four years ago was told that he had tuberculosis and gave up his work and went to Denver, where he soon got better.

Present trouble, about two years ago began to have severe headache limited to left temple and left eye, radiating at times to left occiput. Vision and hearing slightly impaired and light seemed to hurt the left eye. The patient stated that during the past two years he had seen about fifteen doctors, including one or two ophthalmologists, and that he had had medicine to take and medicine to drop in the eye without permanent relief. Finally, it was agreed by two doctors that if he would have all the teeth extracted the pain would cease. This, according to the statement of the patient, without an X-ray and in spite of the fact that the teeth seemed to be in good condition. The teeth were extracted, but the pain continued. In such a case it would be a poor diagnostician who would not think of the teeth as a probable cause, but to have them removed without employing every possible means to prove them guilty, is hardly short of criminal. One must ever keep in mind the fact that the patient's statements may not follow strictly the line of truth, and for this reason it is not wise to judge too harshly, but it seems advisable at least to sound a warning against the extracting of teeth without just cause.

The physical examination in this case showed the evidence of fibroid phthisis in the right lung and a general arterio sclerosis with degeneration of the heart muscle. The examination of the eye ground was negative. The laboratory tests revealed the fact that he had a strongly positive Wassermann, which was confirmed by three successive tests.

Anti-syphilitic treatment promptly relieved the pain and brought about a condition of general well-being with a pronounced increase in flesh.

**Dr. Antonio D. Young** presented a case of progressive bulbo-spinal muscular atrophy. Dr. Young stated that those disorders which attack chiefly the anterior horns are called progressive muscular atrophies and those attacking first the muscles and their nerves are known as muscular dystrophies. This classification is merely one of convenience, as they are really one and the same. Many set divisions have been described, as, for instance, amyotrophic spinal paralysis, where the pyramidal traits are markedly involved. Except in the hereditary type, which is not now under discussion, the disease begins in middle life. All toxic infectious factors are given as causes, as is mental strain and exposure.

The symptoms in the patient shown were a gradual weakening of the voice followed by a slowly developing weakness and atrophy of the entire muscular system. The disease has now been present for about a year. All the muscles are extremely atrophied. The patient can hardly swallow and with difficulty hold the head erect. She cannot walk or stand and has very little use of the hands. There are no sensory disturbances and the sphincters are not involved.

Dr. Young called attention to a similar case presented to the Society several months ago. This patient has since died of respiratory failure.

In both cases all laboratory findings were negative.

**JOURNAL OF THE OKLAHOMA STATE MEDICAL ASSOCIATION**

VOLUME X

FEBRUARY, 1917

NUMBER 2

PUBLISHED MONTHLY AT MUSKOGEE, OKLA., UNDER DIRECTION OF THE COUNCIL

DR. CLAUDE A. THOMPSON, EDITOR-IN-CHIEF

ENTERED AT THE POSTOFFICE AT MUSKOGEE, OKLAHOMA AS SECOND CLASS MAIL MATTER, JULY 28, 1912

THIS IS THE OFFICIAL JOURNAL OF THE OKLAHOMA STATE MEDICAL ASSOCIATION. ALL COMMUNICATIONS SHOULD BE ADDRESSED TO THE JOURNAL OF THE OKLAHOMA STATE MEDICAL ASSOCIATION, BARNES BUILDING, MUSKOGEE, OKLAHOMA.

The editorial department is not responsible for the opinions expressed in the original articles of contributors.

Reprints of original articles will be supplied at actual cost, provided request for them is attached to manuscript or made in sufficient time before publication.

Articles sent this Journal for publication and all those read at the annual meetings of the State Association are the sole property of this Journal. The Journal relies on each individual contributor's strict adherence to this well-known rule of medical journalism. In the event an article sent this Journal for publication is published before appearance in the Journal, the manuscript will be returned to the writer.

Failure to receive the Journal should call for immediate notification of the editor, 507 Barnes Building, Muskogee, Okla.

Local news of possible interest to the medical profession, notes on removals, changes in address, deaths and weddings will be gratefully received.

Advertising of articles, drugs or compounds not approved by the Council on Pharmacy of the A. M. A. will not be accepted.

Advertising rates will be supplied on application. It is suggested that wherever possible members of the State Association should patronize our advertisers in preference to others as a matter of fair reciprocity.

**EDITORIAL****OUR ANNUAL MEETING MAY 8, 9 AND 10.**

Through an error some of the envelopes lately used for mailing from the Secretary's office state May 9, 10 and 11 as the date of the annual meeting. They have been corrected to read 8, 9, 10, as they should read.

**THE ANNUAL CONFLICT WITH TEXAS.**

The time of meeting of our Association is fixed by the Constitution and By-Laws. The time of meeting of the Texas Association is fixed by the Council of that body. For a long time the same date as ours has been selected, as a rule. Many Oklahoma physicians are Texans and hold a certain pride in that fact, not exceeding that held by the proverbial Virginian in his birth-place to be sure, but strong enough to wish he might attend the Texas meetings occasionally. To further this wish we have presented the facts to the officers of the Texas Association, asked them to consider a possible change and we are assured that the matter will be placed before the proper authorities at the first opportunity. No results, however, can be expected before 1918 as the time of meeting has been selected and widely advertised.

**GETTING IN THE LIMELIGHT.**

Sometime ago we noted the claims of Dr. Carl von Ruck, Asheville, as to the efficacy of certain vaccines used, in the supposed protection of children, especially against tuberculosis and after contraction. After a time, through the insistence of someone, probably a United States Senator, the Public Health Service was commissioned to make an investigation of the matter, which was started in the Asheville laboratory, under prearranged terms of exactness. The Public Health Service soon withdrew from the investigation, reporting in substance, that the methods of the investigation were a matter of controversy, that they could not make it along the lines originally agreed upon on account of interference in the laboratory. This

ended the matter until lately, through the agency of Senator Luke Lee of Tennessee, a statement as emanating from the Congressional Record has been franked to physicians. The statement intimates by implication much that has heretofore been claimed, contains a letter from Sir Almoth E. Wright of England regretting his inability on account of the war to go further into the matter, and statements from a few physicians in this country that they had tried the vaccines or extract and were favorably impressed, etc. Prior to any of this activity, a Los Angeles authority and laboratory worker took strong exceptions to the von Ruck claims, stating that he could not arrive at the conclusion or results claimed by following the same technic.

Physicians who hoped that something good might come of the claims will regret exceedingly the method to give it publicity through Congressional channels. Scientific claims for methods of treatment should certainly be settled among physicians, for the lay reader is utterly unable to grasp and appreciate the finer points and issues involved. Certainly the Congressional Record is not the proper place for the physician to obtain a clear insight into the merits of a remedy.

### REPORTING BIRTHS AND DEATHS AND GOOD CITIZENSHIP

—, Oklahoma, January 16, 1917.

Dr. John W. Duke,  
Guthrie, Okla.

Sir:

I have been handed a letter wanting to know why I had not been reporting births and deaths. This matter was up in our society and we decided that unless there was some way for us to get something for our trouble we would stop. Our county physician would every month go before the county commissioners, swear out an account against the county and collect \$50.00, making \$600.00 in a year. We were doing the work and getting nothing, so we thought we would stop his \$50.00 per month. Let me hear from you.

Yours truly,

We congratulate the county society said to have done this on the possession of a member whose unselfishness and magnanimity is too well developed to be followed by ordinary law abiding physicians. It might be well to mail this individual who has forgotten the explicit duty he owes to the people of his county and state a short letter containing the following (Section 6795. Revised Laws of Oklahoma): "It shall be the duty of all physicians practicing in each county in this State to within thirty days report to the County Superintendent of Public Health, all births, and deaths, \* \* \* \* \*. Any person who shall knowingly violate any of the provisions of this act, or any lawful rule or regulation \* \* \* \* \* shall be guilty of a misdemeanor \* \* \* \* \* shall be punished by a fine of not less than ten dollars and not more than fifty dollars or imprisoned in the county jail not more than thirty days, or both \* \* \* \* \*". If the county attorney does not see fit to prosecute the matter, the State Commissioner might try the efficiency of the Attorney General's office, as he is empowered to do by the same act. Perhaps it would be well to take this salutary step in some counties anyway. The matter would then be removed from the local influence and inertia sometimes prevalent in a community where the very men we fondly hope may be relied on to uphold law, improve the condition and happiness of the people, so far forget themselves as to be found in the attitude of basing their actions on what they believe the law should be instead of what it really is. It should not be forgotten that the county superintendent of health wrote the law, that he is growing immensely wealthy out of the munificent funds allowed him by the law, in fact we should assume the position that the law was made for his benefit only.



Even if the law did not require it, as it does, it should be the pride and pleasure of each physician to promptly report births and a duty to report death and communicable diseases. The writer firmly believes that as a class, the medical profession must shoulder further responsibilities and cooperate more than ever in enlarging and making better public health laws, if we are to fulfil our proper function and fill the altruistic niche accorded us by our severest critics. Certainly the community blessed with physicians who attempt to evade the terms of a law identical with that in many states of the Union, peculiarly applicable to them and no other class, is not fortunate in the healers fate has allotted it. We do not believe the county society assumed any such unlawful attitude, for we believe the physicians as a whole of any county in our state tower above all other classes in their endeavor to make the State a civilized and better community in which to live.

### WORKMEN'S COMPENSATION LAW UPHELD BY SUPREME COURT.

The Oklahoma Supreme Court in an opinion by Justice Hardy, concurred in by all the court, sustains the validity of the Workmen's Compensation Law. It was contended that a person injured had a right to exact damages by suit; that the Legislature had no right to nullify this constitutional right to recover damages in certain classes of injuries; that the issue was deprived the right of trial by jury, etc. The opinion admits that the changes brought about by the act are far reaching and revolutionary, but argues its right on the grounds of necessity and progressiveness, citing similar legislation in British Colonies and Great Britain, and 33 states and territories of the Union. Among other things suggested by the court is \* \* \* \*. Instead of the loss being borne as heretofore in the large majority of cases by the injured employe or his dependent ones, it was the belief that such losses should be borne by the industries causing them \* \* \* \*. In our modern industrial life accidents to workmen are all but inevitable \* \* \* \*. Recovery was had only after costly and vexatious litigation.

Physicians are not much concerned with the fine legal discriminations drawn by courts in analyzing laws. We are concerned, however, with what the Legislature may see fit to do as to making changes in the present law, and there is every indication that they may change the law in some respects. The laboring men desire the disability amount to be raised and to run longer than at present or to begin earlier. If we have any suggestions to make we should certainly consider making one to fit the case of the injured person whose disability is to last longer than two weeks. At present the physician is called, assumes charge of the case, and, after two weeks, no one is to compensate him for additional service unless the injured person does. The rule is that he is neither able or willing to do so. He says the law has deprived him of all but very meager compensation. No physician likes, for instance, to release an infected compound fracture, in the middle of its height of troublesomeness, he cannot estimate what the end results may be if proper treatment is neglected. It seems we might have a clause empowering the Industrial Commission to allow extra compensation for continued cases in these rare instances. It should not hurt the insuring company much and would result in good and satisfaction to both employe and physician.

The medical profession is willing to do its share to the end that prolonged and unjust litigation may be avoided, but there is the strongest idea in the minds of the employe and physicians attending him that the present law is drawn and executed, at least in the execution, more for the benefit of the employer than anyone else. Some bluntly call it an employers' protection law instead of a workmen's compensation affair.

Oklahoma physicians should pay some attention to any proposed changes that may be attempted.

## CURRENT MEDICAL LITERATURE

Conducted by

DRS. L. F. WATSON and L. J. MOORMAN, Oklahoma City  
and FRED J. WILKEMEYER, Muskogee

## THE MEDICAL HISTORY AND LAST ILLNESS OF JOHN B. MURPHY.

Drs. C. L. Mix, R. H. Babcock, J. E. Keefe and W. A. Evans (Murphy's Clinics, December, 1916) contribute statements in detail of the medical history and last illness of our most distinguished and lamented educator, surgeon and citizen. The contribution having a singular interest for all physicians, both on account of the unusual conditions depicted and by reason of the outstanding prominence of Dr. Murphy, is here noted. In passing it is well to note that with December Murphy's Clinics end their existence, for, as is stated by Dr. E. Wyllys Andrews, "The head of our Clinic has departed this life and no one is ready to take up his mantle \* \* \* \* The book must be suspended because its soul is gone."

Dr. Murphy was fifty-eight years old. Family history shows some members had tuberculosis, friends asserting two brothers and one sister died of the disease. To this Dr. Murphy never alluded, taking care not to expose himself and lived the month of March either in the South or California. In boyhood he had some severe abdominal infection; on vague recollection based a diagnosis of appendicitis; stated it never again bothered him and concluded that appendix was more or less lost in the pus-sac. In Vienna, in 1883, he had some attacks of hematuria and was advised by one of the professors that he had tuberculosis of the right kidney, that he should leave Europe at once. He started home, but before reaching the German frontier his hematuria had ceased, never to return. Dr. Murphy did not like to talk of that illness and preferred to believe that it was not tuberculous, but essential hematuria, however all through life he had traces of albumen on over exertion and after mental strain or anxiety; he believed it a fatigue albuminuria; casts were never found but an occasional red cell showed. In the last four or five years occasional hyaline casts were found, but granular casts and signs of nephritis never appeared. Dr. Mix accepted his view as to the albuminuria and did not regard the matter seriously. In 1888 he had an attack of typhoid without complications.

In 1890, shortly after his marriage, he was suddenly seized with an obscure pulmonary affection which caused him great anxiety. He was advised by certain Chicago physicians that he truly had pulmonary tuberculosis. This was confirmed by Dr. J. M. DaCosta, but on going to New York, Dr. Austin Flint told him he had a slow pneumonia without crisis and that consolidation had not taken place. This was very comforting to him and he went west remaining six months. At Dr. Fenger's suggestion he went to Berlin, consulted Von Leyden, who confirmed Dr. Flint's opinion. On this trip he secured some of the first Koch's lymph, now called Koch's tuberculin, and brought it home. He had no more illness until 1905, when he had a severe pain in the left arm and shoulder, which he attributed to neuritis. By having his arm supported high above his head in a sling as he lay in bed, the pain was tolerable. In the light of later developments and his death, one wonders what the real nature of this brachial neuritis was—was it anigral? In March, 1911, he contracted typhoid while in Florida on his usual trip. The diagnosis was practically absolute, seven cases, with one death occurring in his hotel and twenty more outside in Tampa, all traceable to a carrier in a dairy. This illness was rather severe, though he was not delirious, his temperature ranging rarely above 103. This was complicated with severe prostatic pain and swelling, cultures giving bacillus coli communis, leukopena constant 5000 to 5500, but there was never a frank Widal. Mix believes that beyond a doubt this attack of typhoid had a profound effect in developing the aortitis. Dr. Murphy's first anigral attack came but a few months after the typhoid.

Greatly alarmed, he asked Mix to examine him, who told him that his trouble was symptomatically angina. Dr. Murphy "would have none of that diagnosis," says Mix. "What do you mean by angina pectoris?" "And when I explained that I meant a morbid process secondary to aortitis or coronary sclerosis," "that I did not believe in pseudo-angina" \* \* \* \* he would not accept the diagnosis. He then went to Dr. Frank Billings who told him the attacks were angina. Meeting Mix later, he confessed they were probably right. In 1912 he had an obscure illness—in four or five weeks losing sixteen pounds from diarrhoea, neither Drs. Mix or B. W. Sippy could find the cause. About this time Dr. Kendall came direct from his work in Boston on the diarrhoea of infants and examining the stools found bacillus aerogenes capsulatus, getting almost pure cultures of the gas bacillus. Knowing that the bacillus must have carbohydrate material for food, all milk and starch foods were stopped. The patient immediately got well and the diarrhoea never recurred, but this was probably a further factor in developing aortitis, as his attacks of angina came oftener.

During 1913-14 he was fairly well, though he constantly insisted in being too active. To the best of her ability Mrs. Murphy got him away on vacations, but his love for work was overpowering, he loved work itself—alone and of itself. During the winter of 1915-16, his anigral attacks became severe enough to temporarily interrupt his work. His associates noted the "spells" and were alarmed but he guarded his secret of them even from his wife. On one occasion—in the fourth floor operating room, he was so suddenly afflicted that he had to lie down on the floor. This was not known to the physicians until they were advised by his anesthetist, Sister Ethelreda. When asked about the matter he waved it aside, saying the room was too hot and he became dizzy. Attacks of vertigo grew more frequent and when Dr. Mix who had recently learned that aortitis, by reflex through the cardiac branches of the pneu-



mogastric, was responsible for many vertiginous attacks formerly ascribed to cerebral arteriosclerosis, he became more alarmed. December 27, 1915, he had an attack of grip, with purulent discharge from the nose and throat—he was confined to bed three days.

Things came to a crisis about April 9, 1916. He was in bed, had a bad anginal attack, temperature 101, septic sore throat on right side, of streptococic type. This quickly cleared with compound elixir salicylic acid, but the angina grew worse. Thinking that eating breakfast caused it, he would not eat. By giving him his food in bed with no exercise when attacks lessened, it was demonstrated to him that the exertion of getting up to eat, and not the food, caused the attacks. At this time Dr. Murphy realized he could not keep up his former pace, but as he improved, he insisted, despite advice, on doing some work. Later he went to Atlantic City, cancelling all engagements, promising not to return until September 15. This program was carried out up to the time of his death. He went to Wheaton for a time after his Atlantic City trip, stopping in Dr. Mix's office in Chicago on his way to Mackinaw. He had gone down badly in six days, losing several pounds as he would not eat. Eating brought on immediate attacks. A specimen of urine showed sugar—I-2 of 1 per cent., acetone, and diacetic acid. He was then in a state of acidosis. He knew it because of his strange change in ability to focus in his vision—complained of a peculiar taste and thirst in the night: new symptoms. The advisability of his going to Mackinaw being discussed, he questioned, with his usual great fortitude, if he would ever get back alive. It was so hot at Wheaton he said he could not live there. Mrs. Murphy said he had never complained of heat before, bearing it remarkably well. Going was left to him, and he went. The acidosis was a starvation matter. He would not eat and he had used up all his liver sugar. He was advised to take 120 grains sodium bicarbonate four times daily and to eat some carbohydrates. He left for the train with a faded look in his eyes. Dr. Mix felt that he could never work again, telling Dr. Golden, whom he did not see on this last occasion, that he was "all in."

Dr. Murphy died at 3:30 p. m., August 11.

Examination of his heart and blood vessels within six weeks of his death was equally negative, blood pressure 130, no enlargement or widening of aorta coronary sclerosis seemed unlikely, as there was no bradycardia; most cases of coronary sclerosis show marked slowing of the beat. There was not systolic murmur, common in aortitis, no sign of insufficiency. Arrhythmia and inequality—always the sign posts of myodegeneratio cordis, was noted in June on his return from Atlantic City, but they were not marked. Abdomen was negative, gall-bladder never gave trouble. The anginal pain was very low, so the pancreas was suspected, but it was not tender on deep palpation. Kidneys, liver and spleen normal.

We are of the opinion that in its evolution the trouble possibly began eleven years ago with the neuritis in left shoulder and arm; that it was quiescent until lighted up by the typhoid and attack of diarrhoea; that there was a mildly degenerative aortitis and that the streptococic sore throat led to metastatic streptococic aortitis. Dr. Mix tried to comfort him by telling him the degenerative process was not much, but that he had a good deal of streptococic—possibly ulcerative—aortitis; that with rest and care he could get over the infectious part and then have the degenerative part alone to deal with. Yet both were sure that he had a streptococic ulcerative aortitis to deal with and on this belief Dr. Murphy asked that necropsy be made.

Dr. W. A. Evans reports the findings, which harmonize with the history. Whether the boyhood illness was due to appendicitis or tuberculosis of right kidney is open to question; it might have been the latter. The distribution of the aortitis was in accordance with the pain—a great deal of the pain was low, as low as the pancreas—and much of the atheroma was in the abdominal aorta. Extensive pleuritic adhesions were not noted by either Drs. Babcock or Evans, nor was coronary sclerosis, "which can exist without physical signs." "But the diagnosis of angina could not be missed, nor could the eventual termination of this dreadful malady be postponed." Dr. Murphy knew this as well as anybody, and told me (Dr. Evans) that he would much rather die at once than linger as an invalid. "If I am through, I want to quit right away. I don't want to linger after my work is done." For himself he had no fear of death. He was familiar with it in all its aspects \* \* \* \*. "And he died as all brave physicians die."

Dr. R. H. Babcock was consulted by Dr. Murphy in April and July, 1916. He told Dr. Babcock he had noticed the chest pain for six years, but only recently had it become intense enough to make him stop walking and other effort. His description of the pain was typical as to location and intensity, but he seemed not to have a sense of impending death, though he did tell another attendant over the telephone a prolonged attack would kill him unless relieved. Dr. Babcock found nothing noteworthy on examination not already alluded to and on account of the "professional eminence" of the patient, encouraged him in the main, though writing up the diagnosis as angina pectoris. Later Dr. Murphy told Dr. Babcock that he was suffering from acute aortitis, that the condition was attributable to his streptococic infection. This was after Dr. Murphy had been reading Albutt's latest contribution to the subject of angina.

Dr. J. E. Keefe states that on Wednesday afternoon, August 9, Dr. Murphy requested him to make notes on some statements he wanted to make. He had been drowsy all day and told Dr. Keefe that he thought he was going to die and asked that reservations be made for the trip home. In the event of his death he wanted a necropsy made, and wished to state his estimate of the nature of his trouble. Jotted on a piece of paper the substance is as follows: "I think the necropsy will show plaques in my aorta. I had an infection of the kidney thirty-three years ago, probably that is the origin of my trouble. I had appendicitis when a child but have had no symptoms since. Since my trouble began I have had a constant pain or uneasiness in the region of my pancreas. The pain is dull and steady. I cannot help feeling that the seat of my trouble is deep in the abdomen in the region of the pancreas. I think they will find that my trouble is due to metastasis from some point not causing any discomfort.



"The acute infection of my nose a few weeks ago added to the metastatic infection, but that is not the chief source. The chief source will be found in some area in which I have had no discomfort. I think I could have won against my original trouble. I expected to win all the time until last Monday, when I found that I had sugar in the urine and acidosis. That, on top of the other, is too much for me. The acidosis is a starvation acidosis, but I cannot eat without causing pain."

Later in the afternoon Dr. Murphy felt better. He said he was free from pain in the pit of his stomach for the first time since his illness began. He dictated several letters and telegrams, was clear in mind, bright and cheery. Thursday drowsy, sleeping most of the day. Early Friday morning anginal attacks began and lasted until his death at three in the afternoon.

Dr. W. H. Burmeister made the necropsy. Correlated by Dr. Evans the report abridged is about as follows: Appendix adherent all the way to the tip, lying behind the ileum, firmly bound by adhesions, 10 cm. long, lumen apparently obliterated. Has probably had an attack obliterating the organ. In the right renal region is a small mass of kidney tissue, 3x2x2 cm. lobulated, perirenal fat adherent to fibrous tissue; renal artery will not admit fine probe pointed scissors. Center of mass shows caseous mass, edges firm. Center pultaceous, necrotic area is 2.5x1x1 cm. surrounded by apparently renal tissue, pelvis and ureter patent.

Left kidney:—Perirenal fat abundant with numbers of fibrous bands. Kidney large, capsule strips with difficulty, but leaves a fairly smooth surface, parenchyma tore away in a few spots. Measures 14.5x5x7 cm., small cyst in the middle, pelvis dilated, no scars, weight 227 grams.

Anatomic diagnosis:—Chronic tuberculosis (?) of right kidney. Secondary atrophy of left kidney, small cyst of left. Cloudy swelling of left. Fibrous perinephritis. Fetal lobulation of left kidney.

Histologic, Right kidney:—Considerable chronic proliferation of connective tissue. Process progressive. Proliferation of endothelial cells of capillaries, production of new capillaries. Not many leucocytes in the tissues, no giant cells, kidney cells mostly swollen and loosened from basement membrane, cells undergoing necrosis in the neighborhood of broken down area.

Histologic diagnosis:—Chronic persistent infection right kidney, probably due to organism other than tubercle bacillus, as giant cells are absent and nodules are vascular. Left kidney is that of cloudy swelling. My opinion is that the infection began in 1883 and persisted since. Right kidney almost obliterated, capable of function to slight extent. Prostate, normal.

Lungs and pleura:—Entire left pleural cavity is obliterated by firm fibrous adhesions. Right cavity is obliterated posteriorly by adhesions, some few in front, showing as non-continuous strands. No gross scar at either apex, though pleura is thickened. Lungs, normal. The attack of 1890 was probably pleurisy, may have been pneumonia with pleurisy, but that does not account for adhesions in both lungs. No pathology suggestive of pneumonia at time of death. Dr. Murphy never had pulmonary tuberculosis.

Substernal pain, radiating, diagnosed as angina p.

Heart:—Coronary arteries; thoracic and abdominal aorta. Heart slightly enlarged, especially right ventricle, small grayish irregular patch in epicardium, left ventricle. Pulmonary valves smooth, almost transparent, very thin; endocardium of walls smooth and shining r. auricle and ventricle slightly dilated. Left myocardium pale red brick color, friable. Muscle under grayish epicardial spot is disintegrated to depth of 5 mm. Both coronary arteries open for distance of several centimeters from mouths. Contain numerous patches of calcification, not limited to the media, in places almost through adventitia, lumina almost obliterated in spots. Endocardium, left leaflet mitral valve contains a series of yellow plaques, largest measuring approximately 1x1 cm. Aortic valve leaflets, thickening of corpora arantii, one partly calcified. Intima of aorta at sinus of valsalva are calcified nodules, almost outlining insertion of valves. Intima of ascending portion, arch of aorta, are 15 to 20 minute plaques, discrete and confluent, largest 1 to 5 mm., also an atheromatous plaque overlying left bronchus. Intima broken down, media exposed. Descending portion contains great numbers of plaques, some ulcerated. Those in abdominal portion more numerous, nearly all broken down and ulcerated.

Anatomic diagnosis:—Clubbing of fingers. Localized epicarditis. Slight hypertrophy of myocardium. Slight acute dilatation, right ventricle. Acute myomalacia, wall of left ventricle. Slight calcification leaflets of mitral and aortic valves. Arteriosclerosis of coronary arteries and aorta. Both coronaries had atheromatous patches, more in left, mouth of which was almost surrounded. Vessel almost occluded at 5 cm. from mouth.

The atheroma of abdominal aorta extending nearly to bifurcation was an old process, existing for years. Low down the patches had become ulcerated. Atheromatous process in the coronaries and thoracic aorta was recent. Necrosis of the plaques had not begun or proceeded far, but one ulcerated in thoracic portion.

Dr. Murphy's death was due to angina pectoris, caused by atheroma of the coronaries, which was younger by several years than the abdominal condition. Cause of pain in epigastric region was atheroma of abdominal aorta, which Albutt claims stretches the outer arterial coats. The probable seat of the old metastasis was the chronic thirty-year old infection of right kidney. Probable explanation of the acidosis is starvation. Eating increased the pain, consequently he ate very lightly. Why he developed glycosuria in last two weeks of life cannot be said by Dr. Mix. There was an obliterative arteritis of arteries, but he would not say that caused the glycosuria. "Had Dr. Murphy's right kidney been removed in 1883 or any time within twenty years thereafter, I think his arteritis would have been prevented."

C. A. Thompson.

## PERSONAL AND GENERAL NEWS

**Dr. O. R. Gregg**, Alva, has moved to Freedom.

**Dr. H. McKinney**, Temple, is moving to Durant.

**Dr. G. Y. McKinney** is moving from Emet to Kusa.

**Dr. O. H. Parker**, Thomas, has moved to Custer City.

**Dr. J. D. Endfield** has moved from Hastings to Hobart.

**Dr. D. D. Weiser**, Apache, was seriously ill in December.

**Dr. E. J. Wolff**, Waukomis, is doing special work in New Orleans.

**Dr. A. V. Emerson**, Tulsa, attended the Mayo Clinics in January.

**Dr. J. P. Bartley**, Comanche, is doing special work in New Orleans.

**Dr. and Mrs. W. T. Howell**, Duncan, have returned from California.

**Dr. Walter Penquite**, Chickasha, has returned from a hunting trip in Arizona.

**Dr. M. Pinson**, Atoka, has been appointed county physician of Atoka county.

**Dr. T. B. Turner**, Stigler, has been appointed county physician of Haskell County.

**Dr. Sidney Hagood**, Durant, has been appointed county physician of Bryan county.

**Dr. H. E. Stecher**, Supply, is doing special work in Tulane University, New Orleans.

**Dr. T. B. Woods**, Sallisaw, is doing special work in Tulane University, New Orleans.

**Dr. E. R. McAlester**, Seminole, has been appointed county physician of Seminole County.

**Dr. B. S. Gardner**, Marietta, recently suffered dislocation of the hip when he fell from a porch.

**Dr. J. Wade Bone**, Sapulpa, who has been very sick for many months is now able to be in his office.

**Dr. E. A. Abernathy**, Altus, is doing eye, ear, nose and throat work in Tulane University, New Orleans.

**Dr. John A. Haynie**, Aylesworth, for many years secretary of Marshall County society, is moving to Durant.

**Dr. A. A. Thurlow**, formerly of Norman, has returned to that place after an absence of two years in Alabama.

**Dr. O. R. Gregg**, Freedom, received some bad lacerations of the face when his car ran into a barb wire fence.

**Dr. A. F. Anderson**, Claremore, recently had a Ford car stolen, the thieves driving the car out of his garage.

**Dr. James A. Rutledge**, Woodville, and Miss Aline Colby, Ada, were married in the latter city January third.

**Dr. J. C. Watkins**, Checotah, is suffering from several fractured fingers due to a horse jerking the rope he held.

**Dr. J. L. Day**, Norman, has resigned his position at the Oklahoma State Hospital and will enter private practice at Norman.

**Drs. Loyal Martin**, Newkirk, H. M. Stricklen, Tonkawa, and R. C. Young, Arkansas City, will soon erect a hospital at Dilworth.

**Drs. J. J. Hardy**, Poteau, and Harrell Hardy, Bokoshe, accompanied by their families, visited relatives in Tennessee during the holidays.

**Dr. Thomas R. Longmire** and Miss Lona Shannon were married in Oklahoma at the home of the bride's brother, Dr. C. B. Shannon, recently.

**Dr. L. F. Watson**, Oklahoma City, announces his removal to Chicago where he will specialize in surgery and diseases of the thyroid and glands of internal secretion.

**Dr. D. S. Harris**, Drummond, has returned from several weeks in Chicago where he did post graduate work. He bought a car, driving home via Colorado Springs.

**Dr. B. W. Ralston**, Lindsay, and Miss Sue Koontz were married in Okemah, January first, immediately departing for New Orleans, where they will remain a month.

**Drs. G. C. Croston**, Sapulpa, O. C. Coppedge, Bristow, and Jergensen, Drumright, have been appointed physicians in Creek County in their respective commissioner districts.

**Dr. John L. Sims**, Weleetka, has gone to Chicago where he will enter Memorial Hospital as Intern. Dr. Sims expects to stay a year and specialize in genito-urinary and rectal diseases.

**Dr. and Mrs. Chas. R. Hume**, Anadarko, celebrated the fortieth anniversary of their marriage November 27. In addition to the immediate relatives a large number of friends participated.

**Dr. Phillip Skrainka**, St. Louis, announces that beginning with February, he will issue a new medical monthly. The name of the publication will be Medicine and Surgery. Dr. Skrainka is one of the well known medical writers of the country.

**Dr. Bransford Lewis**, St. Louis, was the guest of honor at a banquet of members of the Muskogee County Medical Society, January 11, after which he delivered a lecture on the diagnosis of ureteral, kidney and bladder conditions which he illustrated with lantern slides.

**Dr. J. L. Hoshall**, Oklahoma City, was almost instantly killed by a fracture of the skull due to collision with a wagon and telephone pole during a heavy fog. Mrs. Hoshall was painfully injured at the time. Dr. Hoshall leaves a wife and six children to mourn his death.

**The Coroner's office** exists in Oklahoma, according to Dr. Amos Avery, Sapulpa, who had his name placed on the ticket, received the largest number of votes, was given a certificate of election, filed a bond of ten thousand dollars and is now occupying the office. The opinion of the Attorney General is that there is no such office, as the constitution fails to make provision for it.

**At the meeting** of the Tulsa County Medical Society at the Oklahoma Hospital December 18 1916, a resolution was passed endorsing the administration effort to build and equip a \$200,000 hospital at Oklahoma City to be conducted under the supervision of the Medical Department of the State University. This was the first action taken by any society on the new proposed measure.

**"Symposium on the Medical Profession**, What's the matter with the doctor?" is a matter answered by statements from sixty-six of the world's leaders in their respective lines. These are to be found in the January, 1917, issue of Medical Review of Reviews, New York. They are noted here because the replies are inspiring and helpful to the physician. Space does not permit reproduction, but a copy should be read by every physician.

**Comanche County Medical Society** has appointed the following committees to handle the annual meeting. The first name of each committee is chairman of same. Finance Committee, Drs. G. S. Barber, E. S. Gooch, and Fred Hammond. Committee on Badges, Drs. E. B. Mitchell, J. W. Malcolm and H. A. Angus. Committee on Section Meeting Places, Drs. D. A. Myers, Jackson Brashears, and W. B. Mead. Committee on Transportation, Drs. L. C. Kneec, E. S. Gooch and E. B. Mitchell. Committee on Exhibits, Drs. J. L. Lewis, E. B. Dunlap and C. P. Hues. Committee on Advertising, Drs. L. T. Gooch, C. W. Beard, and L. C. Kneec. Bureau of Information, Drs. E. B. Dunlap, Fred Thompson and E. B. Mitchell.

## COUNTY SOCIETIES

Many of the county societies started out their new year with much good cheer in the way of banquets and extra special efforts to make a social beginning that would cement the feeling of good-fellowship.

**Payne.** Meeting at Stillwater, December 30. Program: Papers were presented by Drs. C. W. Bacon, Yale, and H. C. Manning, Cushing.

**McIntosh** Meeting at Eufaula, January 2. Program: "Cardiac Lesions," Dr. A. B. Montgomery, Checotah; "Causes of Heart Disease," Dr. D. E. Little, Eufaula; "Treatment of Cardiac Diseases," Dr. J. C. Watkins, Checotah.

**Pottawatomie** Meeting January 9, at Shawnee. Program: All forenoon, clinics at the city hospital; medical clinics at the physician's club rooms. Afternoon, a lecture on X-ray work, illustrated by slides, by Dr. Holbrook of Kansas City, after which the annual banquet was held.

**Rogers.** Meeting December 11, at Claremore. Program: "Heocolitis," Dr. A. M. Arnold, Claremore; "Peritonitis," Dr. H. L. Callahan, Collinsville; Clinic by local physicians, Dr. J. F. Means, Claremore; "Pneumonia," open discussion, Dr. J. C. Taylor, Chelsea, Chairman; "LaGrippe and Treatment," open discussion, Dr. W. F. Hays, Chairman, Claremore.

**Marshall.** Meeting at Madill, January 3. Program: "Diagnosis and Treatment of Pellagra," Dr. O. E. Willborn, Kingston; "Diagnosis and Treatment of Lobar Pneumonia," Dr. J. L. Holland, Madill; "Diagnosis and Treatment of Acute Bronchitis in Children," Dr. S. P. Winston, McMillan; "Fee Bills and Compensation," Dr. J. A. Rutledge, Woodville; "Serum Therapy," Dr. Mooney, Madill. Honorable John Vaughn, senator, and Syd. J. Wheeler, representative, were present and discussed matters with the physicians.

**Garfield** held its annual meeting January 5, at Enid. Program: Paper—"Yesterday and Tomorrow," Dr. G. A. Boyle, Enid. Paper or Clinic, Dr. S. N. Mayberry, Enid. Paper—"Sinusitis," Dr. A. S. Piper, Enid. Paper—"Opaque Meal, With Lantern Slides," Dr. E. N. McKee, Enid. Address—"The Medical Profession from a Layman's Viewpoint," Mr. R. M. Elam, Enid. Dr. W. L. Kendall, superintendent of the Home for Feeble Minded Children, invited the physicians to meet at the Home and tendered them a smoker.

**Okmulgee.** Meeting December 11 at Henryetta. Program: "Typhoid and Its Treatment," Dr. A. H. Herr, Okmulgee; "Minor Surgical Dressings," Dr. C. L. Wellman, Coalton; discussion opened by Dr. C. L. Torrance, Okmulgee; "The Schedules of the Industrial Insurance, or an Equalization of the Same With That of the Layman," Dr. N. N. Simpson, Henryetta; discussion opened by Dr. A. H. Culp, Beggs; "Manifestations of Focal Infections," Dr. O. S. Burrow, Wetumka; discussion opened by Drs. A. R. Holmes and J. Lee Riley, Henryetta.

**Pittsburg.** Meeting and banquet at the Busby Hotel, McAlester, January 3rd. Dr. Leigh F. Watson, Oklahoma City, was the guest of honor. Dr. J. M. Penberton, toastmaster. Attorney W.



Hayes Fuller toasted "The Ladies." "Charity" was handled by Dr. James C. Johnston; "Does Money Talk?" by A. U. Thomas; "The Doctor's Family" by Dr. T. H. McCarley; "Those Eyes of Thine" by Dr. Graham Street. The subject of Dr. L. F. Watson's address was "Doctors of Oklahoma." The entertainment features were in charge of Drs. L. F. Willour, L. C. Kuyrkendall and H. M. Foster.

Cleveland held its annual meeting December 19, at Norman. In addition to the representatives of the county being present, five members of the legislature who are students in the University attended the meeting. A banquet was tendered those attending by physicians at the State Hospital. Program: Toasts, "The Medical Profession and the Legislature." Toast Master, Dr. J. L. Day. "What the Medical School Needs," Dr. L. A. Turley. "What the Medical Profession Needs," Dr. Gay-free Ellison. "What the State Hospital Needs," Dr. D. W. Griffin. "Before Statehood," Dr. C. S. Bobo. Response, Hon. H. O. Miller and Members of the Legislature present. Our Guests: Hon. H. O. Miller, Representative from Cleveland County; Hon. Tad Baker, Representative from Carter County; Hon. E. E. Meacham, Representative from Custer County; Hon. Wilburn Cartwright, Representative from Coal County; Hon. Roy Hinds, Representative from Cherokee County; Hon. E. O. Northeutt, Representative from Garvin County.

## CORRESPONDENCE AND MISCELLANEOUS

### HEROIN UNNECESSARY

Excerpts from the minutes of the Committee on Drug Addiction of the Committee on Social Hygiene of the National Committee on Prisons.

It was regularly moved by Dr. Frederick Peterson and seconded by Dr. Samuel W. Lambert that it be resolved that in the opinion of the Committee, the Drug Heroin is of no real value in the practice of medicine, and that its place may be better taken by more efficacious agents that do not menace public welfare.

Resolved, that the committee recommend Federal Legislation to prevent the importation, manufacture and sale of Heroin in the United States of America.

*"Signed"* Samuel W. Lambert, M. D.  
Frederick Peterson, M. D.  
Charles F. Stokes, M. D.  
Frederick Tilney, M. D.  
Simon Baruch, M. D.

*Chairman Committee on Drug Addiction.*  
Helen Hartley Jenkins,  
*Chairman Committee on Social Hygiene.*

Attested:

Joseph D. Sears, *Secretary.*

### A LILLIPUTIAN BABE.

Taloga, Okla., Jan. 5, 1917.

Editor Journal:

I wish to speak to the profession through you of an unique case. After an experience of forty-two years, I have delivered a real Lilliputian babe, a perfect boy; weight 15 ounces, alive and lively; looked around, cried vigorously, bowels moved freely, urinated, swallowed water from finger tip; in fact a perfect mannikin which could have been placed in the proverbial pint cup. It lived six hours as lively as a cricket, then ceased to breath. This can be verified, as many parties saw the babe. I find nothing on record to compare with this, and desire comments from the profession.

Fraternally yours,

E. J. Hughes, M. D.

### SCIENTISTS DISCUSS CANCER.

Symposium on Disease Held by American Association for the Advancement of Science.

Although radium has produced very important palliative results in advanced cases of cancer, and has even, in a considerable number of cases, apparently caused a complete disappearance of the disease, yet it cannot be relied upon to effect a permanent cure in the late stages of inoperable tumors, and therefore the importance of early diagnosis of cancer is again emphasized. Such is the essential message from science to the public on the present status of the radium treatment according to Dr. James Ewing of Cornell University Medical College who took part in a symposium on this disease held December 29th, at the American Museum of Natural History under the auspices of Section K (Physiology and Experimental Medicine) of the American Association for the Advancement of Science. Other papers of special scientific interest were presented by a number of the foremost students of the cancer problem.

Dr. Joseph C. Bloodgood of Johns-Hopkins University spoke from the surgeon's point of view on cancer in the human being, dwelling especially upon the importance of the pre-existing lesions which may develop into cancer and in the treatment and removal of which lies the chief opportunity of pre-

venting this disease. Dr. Bloodgood made it clear that cancer in its early stages is easily cured. "The disease," he said, "usually springs from a pre-existing lesion allowed to go unattended. Chronic irritation of a sore may also contribute. In external cancer the warning is visible or can be felt. Unfortunately pain is rarely present. A mole or a wart, a small area covered with a scab, a small lump or nodule beneath the skin, an unhealed wound, all of these may indicate potential cancer. The appearance of these defects should mean a call upon the physician for examination as to the probability of incipient cancer. Nothing is lost by taking the precaution if symptoms are not found, and on the other hand the risk is too great to allow the warnings to go unheeded. The question in this case is decided by the physician and in many cases a minor operation removes a probable cause of the disease."

"No man ever yet had a cancer on the lip or tongue without first experiencing some warning," continued the speaker. "The defect may be a burn from continued smoking or an irritation from ragged teeth. The probabilities of a cure are excellent when men heed such signals of possible danger and are treated at once. Tobacco users are more subject to cancer than those who do not use it. There is no means of preventing cancer of the breast, the appearance of a lump or a discharge from the nipple being the first sign, but when such lumps are at once removed on their discovery half will be found benign, that is, not cancerous. The removal of benign lumps undoubtedly prevents cancer in many cases since modern medicine clearly recognizes the danger of benign lumps turning into malignant disease of the breast. The chances of permanent recovery in true breast cancer vary with the exact type of the disease but are excellent if it is recognized early and completely removed. The chance of recovery grows less and less as the delay is more and more protracted until cancer is incurable from the extent of the local or general involvement. Cancer of the stomach is a more difficult proposition, but even in such cases there is usually a warning. Abnormal sensations of daily recurrence should not be neglected. So-called indigestion or what is styled 'colic' may be the warning. The chances are that it is not, but it may be so. If the pain, the sensations, the message from this part of the body comes time and time again, especially among people over thirty or forty years of age, a physician should surely be consulted."

"The mortality from cancer," concluded the speaker, "could be reduced considerably if the average person knew how to take care of himself. It is not a 'blood disease', it is not a disease which people have any reason to be ashamed of. So far as physicians can tell it is not brought on by ill health or food. It comes to healthy persons, the healthy man or the healthy woman, but if the simple, easily noticed warnings be heeded the task becomes comparatively easy and the only miracle we have to perform is to educate a million people where we now educate one."

#### ENTHUSIASM.

Enthusiasm is the *dynamics* of your personality. Without it, whatever abilities you may possess lie dormant; and it is safe to say that nearly every man has more latent power than he ever learns to use. You may have knowledge, sound judgment, good reasoning faculties; but no one—not even yourself—will know it, until you discover how to put your *heart* into thought and action.

A wonderful thing is this quality which we call enthusiasm. It is too often underrated as so much surplus and useless display of feeling, lacking in real substantiality. This is an enormous mistake. You can't go wrong in applying all the genuine enthusiasm that you can stir up within you; for it is the power that moves the world. There is nothing comparable to it, in the things which it can accomplish.

We can cut through the hardest rocks with a diamond drill and melt steel rails with a flame. We can tunnel through mountains and make our way through any sort of physical obstruction. We can checkmate and divert the very laws of Nature, by our *science*.

But there is no power in the world that can cut through another man's mental opposition, except *persuasion*. And persuasion is reason plus enthusiasm, with the emphasis on enthusiasm.

Enthusiasm is the art of high persuasion.

And did you ever stop to think that your progress is commensurate with your ability to move the minds of other people? If you are a salesman this is pre-eminent so. Even if you are a clerk, it is the zest which you put into your work that enkindles an appreciation in the mind of your employer.

You have a good idea—don't think that other people will recognize it at once. Columbus had a good idea, but he didn't get "across" with it without much of this high persuasion.

If you would like to be a power among men, cultivate enthusiasm. People will like you better for it; you will escape the dull routine of a mechanical existence and you will make headway wherever you are. It cannot be otherwise, for this is the law of human life. Put your soul into your work, and not only will you find it pleasanter every hour of the day, but people will believe in you just as they believe in electricity when they get into touch with a dynamo.

And remember this—*there is no secret about this 'gift' of enthusiasm*. It is then sure reward of deep, honest thought and hard, persistent labor.

J. Ogden Armour.

#### COUNCIL ON PHARMACY AND CHEMISTRY, A. M. A.

535 N. Dearborn St., Chicago, 12-30-'16

Dr. C. A. Thompson, Secretary,  
Journal Okla. State Medical Assn.,  
Muskogee, Okla.

Dear Doctor:

During December the following articles have been accepted by the Council on Pharmacy and Chemistry for inclusion with New and Nonofficial Remedies:

**H. K. Mulford Company:** Pertussis Bacterin, Mulford.

**E. R. Squibb and Sons:** Urease-Squibb.

**Non-proprietary articles:** Acetylsalicylic Acid. Neutral Solution of Chlorinated Soda.

Yours truly,

W. A. Puckner,  
Secretary Council on Pharmacy and Chemistry.

## NEW AND NONOFFICIAL REMEDIES.

**Mercurialized Serum-Mulford.**—The following dosage forms of mercurialized serum-Mulford, described in New and Nonofficial Remedies, 1916, p. 192:

**Mercurialized Serum-Mulford, No. 5-A.**—Each package contains one 8 c.c. graduated sterile glass syringe with sterile needle, containing the equivalent of 0.0055 gm. (1-12 grain) mercuric chloride.

**Mercurialized Serum-Mulford, No. 5-B.**—Each package contains one 8 c.c. graduated sterile glass syringe with sterile needle, containing the equivalent of 0.011 gm. (1-6 grain) mercuric chloride.

**Mercurialized Serum-Mulford, No. 6-A.**—Each package contains ten 8 c.c. graduated sterile syringes with sterile needle, each containing the equivalent of 0.0055 gm. (1-12 grain) mercuric chloride.

**Mercurialized Serum-Mulford, No. 6-B.**—Each package contains ten 8 c.c. graduated sterile glass syringes with sterile needle, each containing the equivalent of 0.011 gm. (1-6 grain) mercuric chloride. H. K. Mulford Company, Philadelphia, Pa. (Journal A. M. A., Dec. 9, 1916, p. 1759).

**Pertussis Bacterin-Mulford.**—A pertussis bacillus vaccine (see N. N. R., 1916, p. 321). Pertussis Bacterin-Mulford is sold in packages of four syringes containing 50, 100, 200, and 400 million killed Bordet-Gengou bacilli. H. K. Mulford Company, Philadelphia, Pa. (Journal A. M. A., Dec. 16, 1916, p. 1851).

## PROPAGANDA FOR REFORM

(Abridged Report.)

**Dakin's Hypochlorite Solution.**—The following procedure is claimed to have superseded the previously published formulas: Stir 200 gm. chlorinated lime into 5000 c.c. ordinary water and let stand over night. Dissolve 100 gm. anhydrous sodium carbonate and 80 gm. sodium bicarbonate in 5000 c. c. cold water and pour this into the chlorinated lime mixture, and shake for one minute. After one hour siphon off the clear liquid and filter it through paper. A portion of this must not become red if a little dry phenolphthalein is added to it (Journal A. M. A., Dec. 2, 1916, p. 1687).

**Toxicity of Salvarsan.**—From the reports of O. S. Ormsby and J. H. Mitchell, A. M. Moody and J. D. Ellis in The Journal A. M. A., Dec. 9, 1916, it would appear that some of the salvarsan recently on the market has been unusually toxic (Journal A. M. A., Dec. 9, 1916, p. 1764).

**Mayr's Wonderful Stomach Remedy.**—More than a year ago the proprietor of Mayr's Wonderful Stomach Remedy pleaded guilty in the federal court to the charge that the claim that the nostrum was a cure for gallstones, appendicitis and all stomach, liver and intestinal diseases was false and fraudulent. Nearly a year later a placard over the store window of the Mayr establishment the following appears: "Mayr's Wonderful Stomach Remedy, is the Only Known Cure For All Stomach, Liver and Intestinal Complaints. One Dose will Prove it." The federal Food and Drugs Act should have its scope extended so that all advertising for a product shall come under the purview of the act (Journal A. M. A., Dec. 9, 1916, p. 1774).

**Arsenobenzol (Philadelphia Polyclinic).**—Dr. Schamberg explains that the Dermatologic Laboratory of the Philadelphia Polyclinic availed itself of the opportunity to supply their product when salvarsan was not obtainable. Having so served this purpose in the interest of humanity and the public health, the marketing of their product was discontinued when the German product became again available. The laboratory is not established for commercial purposes and could not afford to become embroiled in patent litigation which would no doubt be instituted by the owners of the salvarsan patent (Journal A. M. A., Dec. 9, 1916, p. 1776).

**Sulfo-Selene-Walker.**—The New York Tribune explains that it was caught "napping" when it gave space to a discussion of Dr. C. H. Walker's cancer treatment, "Sulfo-Selene." It explains that, while there is probably no single false statement in the published interview self-sought by Dr. Walker, the impression sought to be conveyed that Sulfo-Selene will cure cancer, rests on no such foundation of evidence as to justify a reputable and responsible physician in setting it forth in the public prints. The Tribune explains that Dr. Walker's preparation has failed to obtain that recognition which would have given it a scientific status, namely, recognition by the Council on Pharmacy and Chemistry (Journal A. M. A., Dec. 16, 1916, p. 1864).

**More Misbranded Nostrums.**—The following "patient medicines" have been held misbranded under the Federal Food and Drugs Act, chiefly because of false and unwarranted therapeutic claims. Mrs. Winslow's Soothing Syrup, declared to contain 5 per cent. alcohol and 1-10 grain morphine sulphate to each fluid ounce together with oil of aniseed, caraway coriander, jalap, senna and sugar syrup (as now marketed the preparation contains no opiate). Johnson's Iodized Extract of Sarsaparilla found to be a simple vegetable preparation with only an appreciable amount of potassium iodide. Matusow's Nulfev contains 51.8 per cent sodium salicylate, an alkaloid, probably berberine, and emodin were present. (Journal A. M. A., Dec. 16, 1916, p. 1865).

**Castrox.**—Castrox is a castor oil emulsion claimed to contain castor oil 50 per cent, glycerin 10 per cent with water and emulsifying agents. It was said to be prepared by a "unique three day process with special apparatus and is more than 'just emulsion.'" It is a MUTUAL emulsion, for the oil and aqueous solution have been united without 'forcing' \* \* \* \* \*

The Council held Castrox to be an unessential modification of an established article, marketed under a proprietary name and with claims which give a false value to a simple castor oil emulsion, and therefore not admissible to New and Nonofficial Remedies (Journal A. M. A., Dec. 25, 1916, p. 1956).



**More Misbranded Nostrums.**—The following "patient medicines" were found misbranded under the Food and Drugs Act in the main because unwarranted and false therapeutic claims were made for them: Smith's Kidney Remedy, found to be a hydro-alcoholic solution containing glycerin, potassium acetate, trace of alkaloid, laxative extractive plant drugs. Hill's Syrup of Tar, Cod-Liver Oil Extract and Menthol, essentially a sweetened hydro-alcoholic solution containing small amounts of chloroform, menthol, morphine and tar; ipecac, tolu, cannabis indica and wild cherry were indicated; cod-liver oil was absent. Mag-No Brand Liniment, essentially an aqueous solution of ammonia, flavored with sassafras oil and colored. Radway's Sarsaparillian, essentially a watery-alcoholic solution of sugar, potassium iodid, arsenic, a trace of alkaloids and certain plant substances. Dr. Shoop's Diphtheria Remedy, consisting of sugar syrup with a very small amount of soluble chromate, glycerin and salicylic acid. Dr. Shoop's Preventives, a tablet containing a small amount of unidentified vegetable extractive matter. Hot Porous Plaster, essentially a capsicum plaster. N. H. Downs Vegetable Balsamic Elixir, a sweetened solution of opium, ipecac, glycerin, and small amounts of calcium, potassium, and iron compounds, flavored with anise. Kopp's Baby's Friend, containing 8.5 per cent alcohol and 1-8 grain morphin sulphate to the fluid ounce. Prof. Hoff's Prescription, formerly known as Hoff's Consumption Cure. Dr. Haynes' Arabian Balsam, apparently a mixture of cotton seed oil, turpentine and oil of cumin. Russia Salve, sold as a cure for conditions ranging from "cancers" to "mosquito bites" and from "swelled nose" to "ingrowing nails" (Journal A. M. A., Dec. 23, 1916, p. 1956-1957).

**Sodium Cacodylate in Syphilis.**—While Nichols has shown that sodium cacodylate is worthless as a spirocheticide, it is still being used in the treatment of syphilis, and it is the essential constituent of venarsen, a proprietary syphilis remedy. As a result of extensive clinical trials, Dr. H. N. Cole concluded that sodium cacodylate has no spirocheticidal value. At the utmost it has perhaps a slight action on the papular and nodular syphilids, but in no case is this effect to be compared with that produced by mercury and potassium iodid. In cases of syphilis with mucous patches sodium cacodylate is worse than useless (Journal A. M. A., Dec. 30, 1916, p. 2012).

**Tanret's Pelletierine.**—The exact composition of Tanret's Pelletierine is not known, but is believed to be similar to the pelletierine tannate of the U. S. P. This is said to be a variable mixture of the tannates of four alkaloids of pomegranate. As only two of the alkaloids have tenifuge properties the activity of the different preparations varies with the proportion of these alkaloids which are present (Journal A. M. A., Dec. 30, 1916, p. 2030).

**Mercuric Benzoate.**—When mercuric benzoate is dissolved in sodium chloride solution for injection purposes a complex mercuric compound is produced in which the mercury is a part of the acid radical. It is safe to assume that the therapeutic effect of a given weight of mercury as mercury benzoate in a stated volume of sodium chloride solution will be the same as that of the same weight of mercury in the form of mercuric chloride in the same volume of sodium chloride solution (Journal A. M. A., Dec. 30, 1916, p. 2030).

**Quinine Injection.**—By taking proper precautions the number of cases of abscess formation and necrosis from the injection of quinine may be greatly reduced, but the danger of their occurrence cannot be entirely eliminated. For this reason all authorities agree that the administration of quinine by injection should be confined to the most urgent cases of pernicious malaria. The two most important precautions are, that the injection must be intramuscular and that the solution should be dilute—not stronger than ten per cent. The best salts are quinine dihydrochloride and quinine and urea hydrochloride (Journal A. M. A., Dec. 30, 1916, p. 2030).

**The Status of Antipneumococcus Serum.**—The injection of the proper antipneumococcus serum in pneumonia caused by pneumococcus Type I, is believed to be beneficial, but the serum treatment of pneumonia is still in the experimental stage. The pneumococci fall into various groups according to their immunologic relations and the first requisite for a rational use of the serum treatment of pneumonia is the determination of the particular type of the pneumococcus concerned in a given case (Journal A. M. A., Dec. 30, 1916, p. 2030).

## NEW BOOKS

### PRACTICAL MEDICINE SERIES, 1916.

**Gynecology, Volume IV.** Edited by E. C. Dudley, A. M., M. D., and Herbert M. Stow, M. D. Illustrated, 232 pages, price, \$1.35. The Year Book Publishers, 327 South La Salle Street, Chicago.

**General Medicine, Volume VI.** Edited by Frank Billings, M. S., M. D., Assisted by Burrell O. Raulston, A. B., M. D. Illustrated, 342 pages, price, \$1.50. The Year Book Publishers, 327 South LaSalle Street, Chicago.

**Obstetrics, Volume VII.** Edited by Joseph B. DeLee, A. M., M. D., and Herbert M. Stow, M. D. Illustrated, 250 pages, price, \$1.35. The Year Book Publishers, 327 South LaSalle Street, Chicago.

**Materia Medica and Therapeutics, Volume VIII.** Edited by George F. Butler, Ph. G., A. M., M. D., and

**Preventative Medicine.** Edited by Wm. A. Evans, M. S., M. D., L. L. D., Ph. D. Illustrated, 382 pages, price, \$1.50. The Year Book Publishers, 327 South LaSalle Street, Chicago.

## INTERNATIONAL CLINICS.

**Volume II, Twenty-sixth Series, 1916.** Edited by H. R. M. Landis, M. D., Philadelphia and other leading members of the profession throughout the world. Illustrated, 311 pages. J. B. Lippincott Company, Philadelphia.

This issue maintains the usual high standard of those issued before. Dr. George M. Dorrance offers a suggestion worthy of trial, in which he advocates the dessication of tissues after removal of carcinomatous growths, the dessication to involve well beyond the field of operation. Orthopaedic problems presented by the European War by Dr. Robert B. Osgood offers practical suggestions that might be available in much of our civil practice.

**Volume III, 26th Series, 1916.** Edited by H. R. M. Landis, M. D., Philadelphia, with the collaboration of Chas. H. Mayo, M. D., Rochester, Sir Wm. Osler, M. D., Oxford, England, and other eminent American and European authorities. Illustrated, 309 pages, J. B. Lippincott Company, Philadelphia and London.

This volume contains valuable articles on Spontaneous Pneumothorax, Radiographic Demonstration of Spontaneous Pneumothorax; The X-ray in the Diagnosis and Study of Pulmonary Tuberculosis; The Diagnosis of Thoracic Adenitis; Gonorrhea in the Male; The Analysis of Fifth Cases of Dysthyroidism; Sarcoma of the Kidney; Mixed Tumor removed from an Infant Twenty-one Months Old, Recovery. The volume contains many other articles of which space does not permit mention.

## THE MEDICAL CLINICS OF CHICAGO

**The Medical Clinics of Chicago.** Volume II, Number II (September, 1916). Octavo, 196 pages, 22 illustrations. Philadelphia and London: W. B. Saunders Company, 1916. Price per year, paper, \$8.00; cloth, \$12.00.

Among the contributions in this volume of especial interest are: "Case of acute miliary tuberculosis strikingly resembling typhoid," Williamson. "Feeding the normal baby with artificial foods," Abt. "A case of beginning general paresis," Hamill. "Carcinoma of the head of pancreas," Tice. "Etiology and treatment of acne," Zeisler. "Diabetes in the young and a case of renal glycosuria," Strouse. "Chronic diarrhoeas," Friedman. "Syphilis of the stomach," Portis. "Pleurisy and gastric spasm: The morphine habit subsequent to lead colic," and a "Case of myelogenous leukemia," Mix. "Differential diagnosis of a case with an enormous number of nucleated red cells in the circulating fluid," Beifeld.

**The Medical Clinics of Chicago.** Volume II, Number III (November, 1916). Octavo of 211 pages, 44 illustrations. Philadelphia and London: W. B. Saunders Company, 1916. Published Bi-monthly. Price per year: paper, \$8.00; cloth, \$12.00.

This number contains a remarkably clear exposition of the gastric and duodenal ulcer question, "The modern medical treatment of chronic ulcer of the stomach and duodenum," by Dr. Walter Hamburger. The surgical handling, rather when they become surgical, is considered. The reasoning is clear, the subject always interesting, and this offering should be closely studied by the profession. Infantile paralysis is considered by both Drs. Abt and Hamill. Among others especially interesting is one by Pusey on "Some cases of eczema from external irritation," which throws light on some of our failures in treatment. "Treatment of chronic colon pyelitis by pelvic lavage," by Kretschmer, with special reference to accurate diagnosis in order to succeed, is very instructive. "Polycystic kidneys" and "A case of recurrent endocarditis with cerebral embolism," by Williamson, are matters of great interest. Dr. Frank Smithies offers "Cases illustrating spasm of the cardia and cardiospasm associated with diffuse dilatation of the esophagus."

**The Clinics of John B. Murphy, M. D.,** at Mercy Hospital, Chicago. Volume V, Number 6 (December, 1916). Octavo of 217 pages, 47 illustrations. Philadelphia and London: W. B. Saunders Company, 1916. Published Bi-monthly. Price per year: paper, \$8.00; cloth, \$12.00

This number contains the usual high-class contents of its predecessors. The most interesting is that alluding to Dr. Murphy's medical history and last illness, which is more fully noted under Current Medical Literature, this issue.

**Constipation, Obstipation and Intestinal Stasis,** by Samuel Goodwin Gant, M. D., LL. D., Professor of Diseases of the Colon, Sigmoid Flexure, Rectum and Anus in the New York Post-Graduate Medical School and Hospital. Second edition enlarged. Octavo of 584 pages, with 258 illustrations, Philadelphia and London: W. B. Saunders Company, 1916. Cloth \$6.00 net; Half Morocco \$7.50 net.

In this volume the author emphasizes the importance of determining the cause in each case of constipation and using treatment to fit the individual case, pointing out the impracticability of any routine method of treatment.

In treatment he emphasizes the value of exercise, diet, hydrotherapy, massage and other mechanical means. He has included under protest a chapter on medical treatment, calling attention to the fact that cathartics rarely accomplish a cure and that they are not to be recommended where the patient can be treated by any other means.

The chapter on mechanical causes and an surgical treatment are especially good, the different conditions and the steps in operative procedures being clearly shown in a large number of illustrations.

Nesbitt.

**The Endemic Diseases of the Southern States.** By William H. Deaderick, M. D., and Loyd Thompson, M. D., of Hot Springs, Arkansas. Octavo volume of 546 pages with 117 illustrations. Philadelphia and London: W. B. Saunders Company, 1916. Cloth \$5.00 net; Half Morocco \$6.50 net.

There are two classes of books that should appeal to the physician. One a well written monograph and the other a history and treatment of diseases peculiar to his locality. Deaderick and Thompson have supplied the latter in their "Endemic Diseases of the Southern States." In this book of over five hundred pages they have succinctly set forth, the natural history, prophylaxis and treatment of Malaria, Blackwater Fever, Pellagra, Amebic Dysentery and Hookworm Diseases. The illustrations, schematic and otherwise, are in strict keeping with the merits of the publication. The book fills a distinct place in the library of the Southern physician.

Heitzman.

**Bacteriology and Pathology for Nurses.** By Jay G. Roberts, Ph. G., M. D., of Oskaloosa, Iowa. Second Edition Thoroughly Revised. 12 mo., of 210 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1916. Cloth, \$1.25 net.

The author of this volume believes the nurse must know something of bacteriology and pathology in order to become the teacher of the masses she should be in public life if she is to carry out her high and proper function. Nurses have great opportunity to educate their associate patients on the dangers of infection and vicious metabolism, but in order to do so they must know the reasons of observed phenomena. Then, too, good nurses are and must be extremely observant of the minor changes in the patient's condition. In order to attain that end they must know the processes accompanying invasion and infection of the organism. This little work reasons out in clear manner the causes of bacterial infection and the resulting pathology. It is worth study by the nursing body.

**Care of Patients** undergoing Gynecologic and Abdominal Procedures, before, during, and after operation, by E. E. Montgomery, M. D., Professor of Gynecology in Jefferson Medical College, Philadelphia. 12 mo. of 149 pages with 61 illustrations. Philadelphia and London: W. B. Saunders Company, 1916. Cloth, \$1.25 net.

Weiss, Standardization of Definite Procedures during Gynecological Operations (American Journal Obstetrics, January, 1917) strongly indicts the profession for its lack of uniformity in handling gynecologic patients. Wide variation in the technic at the hands of different operators and in different institutions is to be noted on visiting the clinics and operating rooms throughout the country. Of course there must be some "best" manner of doing everything connected with the pre- and post-operative case and in doing the little things that count so much for or against the patient during the operation itself, but the difficulty lies in adopting uniform steps, omission of any one of which may greatly affect the patient.

The writer of this is one of the country's best known gynecologists. He has endeavored to represent a plan to greatly accelerate the work of the surgeon, add to the comfort of patient and redound to the credit of the assistants. Care of the patient from entrance is considered, as is most of the possible complications or deviation from the normal.

**A Manual of Nervous Diseases,** by Irving J. Spear, M. D., Professor of Neurology at the University of Maryland, Baltimore. 12 mo. of 660 pages with 169 illustrations. Philadelphia and London: W. B. Saunders Company, 1916. Cloth \$2.75 net.

This work is intended to fill a long felt want on the part of the physician for a work of conciseness and simplicity on nervous diseases. The writer thinks that physicians generally regard the study of nervous disease as particularly difficult. With this idea in view he endeavors to reduce to simplicity the study of nervous affections. The volume is well illustrated, is of such convenient form that it may be easily consulted and bears all the marks of very great care in text construction.



## OFFICERS OF COUNTY SOCIETIES

County	President	Secretary
Adair	J. Patton, Stilwell	A. J. Sands, Watts
Alfalfa	S. B. Growden, Cherokee	L. T. Lancaster, Cherokee
Atoka		
Beaver		
Beckham	J. E. Yarbrough, Erick	
Blaine	M. W. Buchanan, Watonga	J. A. Norris, Okeene
Bryan	J. H. Shuler, Durant	D. Armstrong, Mead
Caddo	W. T. Hawn, Binger	C. R. Humc, Anadarko
Canadian	P. F. Herod, El Reno	W. J. Muzzy, El Reno
Choctaw	V. L. Person, Boswell	E. R. Askev, Hugo
Carter		
Cleveland	J. N. Williams, Norman	Gayfree Ellison, Norman
Cherokee		
Custer	M. C. Comer, Weatherford	S. C. Davis, Clinton
Comanche	L. A. Milne, Lawton	G. Pinnell, Lawton
Coal	J. B. Clark, Coalgate	A. Cates, Tupelo
Cotton	M. T. Clark, Temple, R. R. No. 1	G. O. Webb, Temple
Craig	C. S. Neer, Vinita	W. R. Marks, Vinita
Creek	R. M. Sweeney, Sapulpa	Geo. H. Wetzel, Sapulpa
Dewey		
Ellis		
Garfield	W. L. Kendall, Enid	James H. Hays, Enid
Garvin	G. L. Johnson, Pauls Valley	N. H. Lindsey, Pauls Valley
Grady	E. E. Dawson, Chickasha	Martha Bledsoe, Chickasha
Grant		
Greer	E. M. Poer, Mangum	T. J. Horsley, Mangum
Harmon		
Haskell	M. VanMatre, Keota	J. R. Waltrip, Kinta
Hughes		
Jackson	D. C. Buck, Eldorado	W. H. Rutland, Altus
Jefferson		
Johnson	C. B. Ballard, Mannsville	H. B. Kniseley, Tishomingo
Kay		
Kingfisher		
Kiowa	Wm. McIlwain, Lonewolf	A. L. Wagoner, Hobart
Latimer		E. B. Hamiltou, Wilburton
Le Flore		
Lincoln		
Logan	A. A. West, Guthrie	A. M. Marshall, Chandler
Love		E. O. Barker, Guthrie
Mayes	J. E. Hollingsworth, Strang	W. C. Bryant, Choteau
Major		
Marshall	A. E. Ballard, Madill	O. E. Wellborn, Kingston
McClain		
McCurtain		
McIntosh	W. P. Lee, Checotah	Wm. A. Tolleson, Eufaula
Murray	J. A. Adams, Sulphur	W. H. Powell, Sulphur
Muskogee	I. B. Oldham, Muskogee	J. G. Nohle, Muskogee
Noble	Bruce Watson, Perry	T. F. Renfrow, Billings
Nowata	J. E. Brookshire, Nowata	J. R. Collins, Nowata
Okfuskee	H. A. May, Okemah	Jno. L. Sims, Weleetka
Oklahoma		
Okmulgee	N. N. Simpson, Henryetta	H. F. Breese, Henryetta
Ottawa	R. F. Von Cannon, Miami	G. P. McNaughton, Miami
Osage	J. M. Ennis, Pawhuska	Benj. Skinner, Pawhuska
Pawnee		
Payne	E. M. Harris, Cushing	J. B. Murphy, Stillwater
Pittsburg	J. O. Gruhhs, N. McAlester	J. C. Johnston, McAlester
Pottawatomie	J. H. Scott, Shawnee	G. S. Baxter, Shawnee
Pontotoc	C. L. Orr, Ada	M. L. Lewis, Ada
Pushmataha		
Rogers	W. E. Smith, Collinsville	W. A. Howard, Chelsea
Roger Mills		
Seminole		
Sequoyah		
Stephens		
Texas		
Tulsa	A. W. Roth, Tulsa	W. Forest Dutton, Tulsa
Tillman	A. J. Hays, Frederick	J. E. Arrington, Frederick
Wagoner		
Washita	D. W. Bennett, Sentinel	A. S. Neal, Cordell
Washington	W. E. Ramuel, Bartlesville	J. G. Smith, Bartlesville
Woodward	Ralph Workman, Woodward	C. W. Tedrowe, Woodward
Woods	Isaac Hunt, Freedom	D. B. Ensor, Hopeton

**OFFICERS OF OKLAHOMA STATE MEDICAL ASSOCIATION—ELECTION MAY 11, 1916.**

Meeting Place—Lawton-Medicine Park, May 8, 9, 10, 1917.

President, 1916-17—Dr. Chas. R. Hume, Anadarko.

President-elect, 1917-18—Dr. W. Albert Cook, Tulsa.

1st Vice-President—Dr. Fowler Border, Mangum; 2nd Vice-President—Dr. A. R. Lewis, Ryan;  
3rd Vice-President—Dr. Horace Reed, Oklahoma City.

Secretary-Treasurer-Editor—Dr. C. A. Thompson, Muskogee.

Delegates to American Medical Association—Dr. John Riley, Oklahoma City, 1917; Dr. M. A. Kelso, Enid, 1917-18.

**COUNCILOR DISTRICTS.**

1. Cimarron, Texas, Beaver, Harper, Ellis, Woods and Woodward; Councilor, Dr. J. M. Workman, Woodward. Term expires 1919.

2. Roger Mills, Beckham, Dewey, Custer, Washita and Woodward; Councilor, Dr. Ellis Lamb, Clinton.

3. Harmon, Greer, Jackson, Kiowa, Tillman, Comanche and Cotton; Councilor, Dr. G. P. Cherry, Mangum.

4. Major, Alfalfa, Grant, Garfield, Noble and Kay; Councilor, Dr. G. A. Boyle, Enid. Term expires 1919.

5. Kingfisher, Canadian, Oklahoma and Logan; Councilor, Dr. Fred Y. Cronk, Guthrie.

6. Caddo, Grady, McClain, Garvin, Stephens and Jefferson; Councilor, Dr. C. M. Maupin, Waurika. Term expires 1919.

7. Osage, Pawnee Creek, Okfuskee, Okmulgee and Tulsa; Councilor, Dr. Walter E. Wright, Tulsa.

8. Payne, Lincoln, Cleveland, Pottawatomie and Seminole; Councilor, Dr. H. M. Williams, Wellston.

9. Pontotoc, Murray, Carter, Love, Marshall, Johnston and Coal; Councilor, Dr. J. T. Slover, Sulphur.

10. Washington, Nowata, Rogers, Craig, Ottawa, Mayes and Delaware; Councilor, Dr. R. L. Mitchell, Vinita.

11. Wagoner, Muskogee, McIntosh, Haskell, Cherokee and Adair; Councilor, Dr. P. P. Nesbitt, Muskogee.

12. Hughes, Pittsburg, Latimer, LeFlore and Sequoyah; Councilor, Dr. L. S. Willour, McAlester. Term expires 1919.

13. Atoka, Pushmataha, Bryan, Choctaw and McCurtain; Councilor, Dr. J. L. Austin, Durant.

**CHAIRMEN OF SCIENTIFIC SECTIONS.**

Surgery and Gynecology—Dr. McLain Rogers, Clinton.

Pediatrics and Obstetrics—Dr. L. W. Cotton, Enid.

Eye, Ear, Nose and Throat—Dr. A. W. Roth, Tulsa.

General Medicine, Nervous and Mental Diseases—Dr. A. K. West, Oklahoma City.

Genitourinary, Skin and Radiology—Dr. C. R. Day, Oklahoma City.

Legislative Committee—Dr. Millington Smith, Oklahoma City; Dr. J. M. Byrum, Shawnee;  
Dr. W. T. Salmon, Oklahoma City.

For the Study and Control of Cancer—Drs. LeRoy Long, Oklahoma City; Gayfree Ellison, Norman; D. A. Myers, Lawton.

For the Study and Control of Pellagra—Drs. J. Lewis Day, Norman, L. A. Mitchell, Frederick; J. C. Watkins, Checotah.

For the Study of Venereal Diseases—Drs. Wm. J. Wallace, Oklahoma City; Ross Grosshart, Tulsa; J. E. Bercaw, Okmulgee.

Neurology—Drs. Martha Bledsoe, Chickasha; J. W. Pollard, Bartlesville.

Tuberculosis—Drs. L. J. Moorman, Oklahoma City; C. W. Heitzman, Muskogee; Leila E. Andrews, Oklahoma City.

Conservation of Vision—Drs. L. A. Newton, Guthrie; L. Haynes Buxton, Oklahoma City; G. E. Hartshorne, Shawnee.

Committee on First Aid—Drs. F. H. Clark, El Reno; Chas. Blickensderfer, Shawnee; Jas. C. Johnston, McAlester.

Committee on Medical Education—Drs. A. L. Blesh, A. K. West, A. W. White, Oklahoma City.

State Commissioner of Health—Dr. John W. Duke, Guthrie, Oklahoma.

**STATE BOARD OF MEDICAL EXAMINERS.**

LeRoy Bonnell, President, Chickasha; R. V. Smith, Secretary, Tulsa; J. J. Williams, Weatherford; B. L. Dennison, Vice Pres., Garvin; W. T. Ray, Gould; M. Gray, Mountain View; H. C. Montague, Muskogee, and O. R. Gregg, Alva.

Reciprocity with Georgia, Kentucky, Mississippi, Nevada, North Carolina, Wisconsin, Kansas, Michigan, Nebraska, New Mexico, South Dakota, Tennessee, West Virginia.

Meetings held second Tuesday of January, April, July and October, Oklahoma City.

Address all communications to the Secretary, Dr. R. V. Smith, Daniel bldg., Tulsa.

**DR. W. EUGENE DIXON**  
**EYE, EAR, NOSE AND THROAT**

Suite 606-7-8-9-10  
State National Bank Building

OKLAHOMA CITY

---

**DRS. BUXTON & GUTHRIE**

Practice Limited to Eye, Ear, Nose and Throat

Suite 106 Indiana Building

Oklahoma City.

Telephone Walnut 370

---

**DR. D. D. McHENRY**

Practice Limited to Diseases of  
Eye, Ear, Nose and Throat

Suites 301-302 Colcord Building

Oklahoma City, Oklahoma

Telephones: Office: Walnut 7058; Residence: Walnut 7305

---

**DR. G. E. HARTSHORNE**

Practice Limited to Diseases of Eye, Ear, Nose and Throat.

Suite 118½ East Main St.,  
SHAWNEE, OKLA.

Telephone 414

---

**DR. PHILIP F. HEROD**

**Eye, Ear, Nose and Throat**

Goff Building

El Reno, Oklahoma

1-1916

---

**DR. J. W. SHELTON**

Practice limited to diseases of the Eye, Ear, Nose and Throat

129½ Main Street

Office Phone 959

Ardmore, Oklahoma

---

**DR. M. K. THOMPSON**

Practice Limited to Eye, Ear, Nose and Throat.

402 Surety Building

Muskogee, Oklahoma

Phone 383; Residence 980

---

Established A. D. 1908

**GRADUATE NURSES CLUB AND REGISTRY**

27 West Eighth Street


Telephone Walnut 3855

OKLAHOMA CITY, OKLA.



# THE JOURNAL

*of the*



The seal is circular with a five-pointed star in the center. The star has a smaller star on each of its points. The words "GREAT SEAL OF THE STATE OF OKLAHOMA" are written around the perimeter of the seal, and the year "1907" is at the bottom.

## Oklahoma State Medical Association

VOLUME X

MUSKOGEE, OKLA., MARCH, 1917

NUMBER 3

### AN INQUIRY INTO THE MEDICO-LEGAL STATUS OF TRAUMATIC NEUROSES.\*

A. K. WEST, M. D.,

Chief Surgeon, Oklahoma Railway Co., and Professor of Practice of Medicine,  
Oklahoma State University.

For some years past the convictions have been growing upon me as I have observed the tremendous increase of claims made against corporations, especially railways, for alleged personal injuries of a purely functional nature, such as neurasthenia, hysteria and hypochondria, all such claims being supported by apparently high medical authority, that the present accepted medico-legal status of all such cases is erroneous. I am fully aware of the danger and responsibility of flying in the face of authority. It is therefore with some hesitancy that I submit this paper for your consideration.

Most diseases are as old as the human family. However, environment from time to time has brought about new pathological conditions, characterized by a special clinical picture and recognized as a new disease.

The various occupation neuroses made their appearance as new occupations became part of the active environment of the race. Writers' and musicians' cramp, blacksmiths' and ballet dancers' pareses are illustrations.

In 1866, John Erichsen, the Swedish born English surgeon, first described a neurosis due to trauma, especially railway injury, under the name of "railway spine." He regarded the disease as a spinal concussion analagous to the already known cerebral concussion, which produces symptoms without known organic lesion. Since Erichsen's monogram appeared much has been written upon this subject, and a careful review of the literature will reveal the fact that opinion concerning its nature has conflicted markedly from time to time. There has, however, been a steady recession from Erichsen's view until the latest works deny in toto the existence of such a distinct clinical entity. In the meantime railroads and other corporations have been paying about two million dollars per annum to plaintiffs upon the plea of this hypothetical disease as though its reality were as unquestioned as an organic paralysis or an ankylosed joint.

Now let us follow for a moment the mutations in the theory of traumatic neurosis during the past forty years. Erichsen's pathology was concussion with no organic lesion, a shaking up, or a shock merely of the contents of the spinal canal. Erb and Westphal shortly afterwards questioned this and thought there were areas of scattered connective tissue growth.

Rigler, the German, in 1879, first laid stress upon the frequent simulation of

\*Read in Surgical Section, Oklahoma State Medical Association, Oklahoma City, May 10, 1916.

the disease, and taught that all these neuroses were of organic lesion origin, or feigned.

Hodges, in 1880, suggested first that "railway spine" seemed to be a form of neurasthenia.

In 1883, Page, of London, Chief Surgeon of a railway system, maintained strongly that these symptoms had no basis in physical injury at all, but were due entirely to fright or profound mental emotion aroused by the incidents of the collision or derailment. Walton, about this same time, called attention first to the symptoms of many of these cases being strikingly similar to those of hysteria.

Strümpell and Oppenheim, about 1890, bridge the chasm to a degree between former observers by teaching that true "traumatic neurosis" (this term was first used by Oppenheim) must be caused by both a physical and a psychic shock, and the clinical picture a symptom-complex of both neurasthenia and hysteria with sometimes a psychosis, usually hypochondria. This hypothesis was and is held by a large number of writers and teachers, and has frequently been cited as evidence in personal injury suits.

Schultz, in Germany, however, strenuously combated this view, and opposed the introduction of the name "traumatic neurosis" into medical nomenclature. The substance of his opinion is couched in this one sentence: "While a variety of neuroses and psychoses may be induced by trauma, 'traumatic neurosis' as such has no existence." The majority of our American neurologists and surgeons have now accepted Schultz's view.

Charles L. Dana uses these words: "The present tendency of neurology is to deny the existence of any special nervous affection produced by trauma or shock."

J. Chalmers Da Costa says: "The present generally accepted view regarding this subject is that in hysteria and neurasthenia there is no individual neurosis resulting from accident." Pearce Bailey, in his work on "Diseases of the Nervous System Resulting from Accidents and Injury," maintains about the same attitude towards the subject.

Now, what is a reasonable deduction from this short review? That the etiology and pathology of post accident nervous symptoms of whatever kind is not as yet certainly known. It has as yet never been absolutely demonstrated that any relationship exists between the injury and the neurosis save one of coincidence. To accentuate this, note that the vast majority of typical accidents of the character usually judged etiological are not followed by any neurosis, and the vast majority of neuroses are not preceded by injury. This would seem to show that only in individuals predisposed trauma may act as an exciting cause, while the normal subject, greatly in the majority, is not affected. This, indeed, was stoutly maintained by the great Charcot in regard to so-called traumatic hysteria, who taught that "hysteria always represents an inherited or acquired condition which, for its manifestation, only awaits an *agent provocateur*." This provocative agent, or exciting cause, may be a railroad wreck or a matrimonial row.

Out of this tangled skein of conflicting opinions recorded in the literature of this subject, in conjunction with my own experience and observation, I have deducted two conclusions which, so far as I know, are new. My first deduction is: All cases of non-organic and non-malingering nervous disorders induced by or bearing a relationship to trauma are hysterical in nature, for the following reasons:

First, the basis of hysteria is suggestibility. By this hypothesis only can any rational etiological chain be forged between the accident and the post accidental symptoms. These symptoms are due to organic lesion or they are not: if not, the only intelligible connection between cause and effect is purely mental, through suggestion.

Second, every symptom usually ascribed to any form of functional neurosis can be and is simulated, or rather reproduced, in hysterical patients.

Third, all authorities, and my own observation, agree that mental treatment

following an accident is the surest method of preventing or producing a secondary neurosis, according as it is hopeful and optimistic or gloomy and pessimistic. This again is only suggestion. In this connection listen to the words of Da Costa: "The appearance of the symptoms of traumatic neurasthenia is rarely immediate. There is usually an interval between the occurrence of the accident and the development of the disease. It is during this time that treatment by a physician skilled in the management of such disorders is of greatest service, for it is then that the patient's mind can best be turned from the contemplation of his own misfortune and that he can be most easily brought to see that his truest advantage consists in employing every effort for recovery and health. It is mental supervision, together with the ordinary methods of therapeutics, which can in many cases cause the beginning symptoms gradually to disappear instead of becoming progressively worse."

Listen again to Pearce Bailey: "While formal hypnosis is only occasionally advisable in the management of the traumatic neurosis, these disorders may be greatly influenced by suggestion given in other ways. In neurasthenia these suggestions take the form of encouragement and reassurance, and of argument. In hysteria they need to be more subtle and directed in a way that the patient is constantly forced to see that many of his ills are imaginary. To directly deny to the patient the reality of the symptoms is worse than useless. But the physician may dismiss many symptoms as unimportant and say that others, while annoying, are certainly transitory. He may pass without remark certain demonstrations, leading the patient to see that they are unimportant."

"By various devices he can demonstrate that the patient is capable of many things of which he says he is incapable. Suggestions of this kind, repeated day after day, cannot fail in their effect \* \* \* \* \*. But no less important than that the physician should make good suggestions is that he should prevent the patient being controlled by suggestions which tend to keep up the symptoms."

Now, again, notice this quotation from a paper by Zenner, of Cincinnati: "\* \* \* \* \* In a symposium on traumatic neurosis at the 1900 session of the American Medical Association, A. D., Bevan said that the medical attendant more than any other factor is responsible for the development and continuance of traumatic neurosis and claimed that he had nipped such cases in the bud by what he not inaptly termed brutal treatment, telling his patients nothing ailed them, forcibly putting them on their feet and compelling them to walk, and the like \* \* \* \* \*." It is generally believed today the main element in the production of this nervous disease is mental shock, and as a mental state lights up the disease it is scarcely to be doubted that other mental states have a powerful influence on increasing and prolonging it on the one hand, or lessening or removing it on the other; hence the immediate and decided effect of the physician and environment.

Fourth, that childhood and age usually exempt from hysteria are markedly exempt also from any form of traumatic neurosis, as are also the poverty stricken who have no one to coddle them, care for or sympathize with their condition, but who by force of circumstances must needs take up their usual occupation or suffer the pangs of hunger. These also fail to develop this clinical picture.

These reasons might be multiplied and enlarged upon, but we will proceed to our second deduction, which deduction applies only to such cases as are admittedly hysterical.

Medical authority is in error in teaching that accidental injury or psychic shock is or can be the sole cause of the development of a purely functional neurosis. The error consists in failing to recognize two other ever-present etiological elements. A functional neurosis is caused by three factors acting together. First, we must have the hysterical temperament or that unstable nervous condition rendering the patient susceptible to suggestion; second, we have the slight injury or fright, or the two combined; and third, the suggestion that this injury is causing or will cause great and serious disability.

The importance of recognizing this triune or triple cause is far reaching when



we consider these cases in their medico-legal aspect when the claim for concussion of the spine is made in damage actions against railway companies.

Now there is a well known principle of law that recognizes predisposing causes and intervening causes in personal damage claims which appears never to be applied to these cases of traumatic neurosis. To make my meaning clear, let us take a hypothetical case of a suit for damages resulting out of a broken thigh. Suppose the claimant is shown to have had rickets since childhood; that he has had numerous fractures from minor causes at various times in his life; that the injury he sustained was of such a character as would not be liable to cause a fracture in an average healthy individual. This predisposing cause would be recognized and considered by the court and the jury.

Now, supposing that as a result of this broken thigh the patient refuses to have the member splinted or allow the application of traction to be applied in its treatment for the purpose of preventing shortening of the limb, and that after a period the end result is marked shortening and deformity of the limb. The plaintiff's action in preventing the proper treatment is recognized as an intervening cause and given its proper weight by the court and jury. The defendant company can, therefore, be held liable only for the part they play in causing this disability. If therefore, the court and the jury are convinced that the injury which plaintiff received was of such nature as under ordinary conditions could not have caused the fracture of an average healthy man's leg, they would be held responsible for such measure of damage as would have resulted to an average healthy individual; or in considering the permanent defect in marked shortening and deformity, the defendant company would be properly held responsible for the ordinary and usual consequences and disability following a broken leg, but not for the unusual shortening and deformity which was due, not to the defendant company's action in any way, but to the action of the individual himself.

Now, let us apply the above principle of law to the case of traumatic neurosis. I hold that the defendant company could not properly or justly be held responsible for any disability or train of symptoms save those growing out of the bodily injury inflicted. To make my meaning entirely clear let us outline the history of an ordinary case of this kind.

A susceptible individual is shaken up in a railroad accident. He is visited some days later by the claim agent of the railroad. He says he thinks he is all right but wants to consult his physician in regard to the permanency of the injury. The physician, following the lead of medical authorities, tells him that there is no physical injury of any great gravity that can be determined, but that in a certain number of these cases a traumatic neurosis occurs later on which sometimes disables the patient for months or even years. This, of course, at once becomes interesting to the injured party and he wants to know just what these symptoms are. The physician, wittingly or unwittingly, outlines a train of symptoms. The individual, being susceptible to suggestion, begins to study himself and as the days go by begins to look for the sleeplessness, the pains in the back, nervousness, inability to concentrate his thoughts—any and all of the history that has been outlined to him by his physician. To this add the solicitude of family and friends and the suggestion of litigation by lawyer, and you have the usual picture. This environment and concentration acts as any other hypnotic suggestion and he soon begins to feel what he is looking for, what he is expecting.

Of course this hypnosis may be induced by other means, such as the recollection by a friend or acquaintance of knowledge of a case in which a man was disabled from some nervous disorder for a long time after a slight injury; or he may get some standard medical work and read up on his case. But the controlling thought is, with him, that some train of symptoms will probably occur, and this self-centered attitude has all the potency of any other means of suggestion.

Now, assuming this theory to be correct, it is manifestly unjust to hold the defendant railway company responsible for the sum total of disabilities arising out

of these cases, giving no consideration whatever to the hysterical or unstable nervous condition to begin with, and ignoring absolutely the intervening cause of suggestion as created in the environment surrounding these plaintiffs, by their attorney, physician, family or friends.

The theory in my opinion is also of practical importance in this: That so long as the courts hold the agent causing an accident responsible for this train of symptoms a vast number of cases will be feigned, and be able to collect damages where they have not even been hypnotized, for the reason that all authorities agree that it is exceedingly difficult, and often impossible, to detect one who malingerers a neurosis of this character, as it has no physical basis, the symptoms all being subjective. The word of the claimant must be taken and may not be contradicted by physical signs. No one knows this better than certain doctors and lawyers in the larger cities, who thrive as ambulance chasers. If a clear recognition of suggestion as an intervening or intermediate cause were prevalent and given due weight, and only the original bodily injury recognized as a basis for indemnity, an endless number of malingerers would be frustrated in their designs and a considerable number of honest individuals would be saved attacks of traumatic hysteria, the symptoms of which, to them, are as real as a paraplegia or a broken limb.

The object of this paper is not to criticize the courts or jury, who have heretofore found and are still finding in accordance with their belief that the agent responsible for the immediate exciting cause should also be held responsible for the sum total of disabilities, without considering predisposing or intervening causes, but to criticize and question the correctness of medical authority which has been responsible directly for this attitude of our courts of justice. The courts look to the medical men, of course, for information and light upon questions of this kind. They have no means of arriving at a correct estimate of all the elements in a damage suit case except by the introduction of medical expert testimony, and that medical authority generally has in the past been in error in failing to recognize the true cause of all traumatic neurosis is the contention which I make in this contribution before the society.

### CHOREA.

The results of a study of 226 cases of chorea are given by I. A. Abt and A. Levinson, Chicago (*Journal A. M. A.*, Nov. 4, 1916). Chorea is one of the common diseases of childhood, and of the 10,150 patients who have been treated in the Sarah Morris Hospital for Children, chorea was the disease in 2.2 per cent. As regards the age of these patients, it ranged from 3 1-2 to 18 years, but the age of most frequent appearance coincided with that usually given, namely, between the ages of 5 and 14. The disease occurs most frequently about twice as often in females as in males. Season does not seem to be so important; the greatest number of cases were observed in December and January and the smallest number in October. The generally credited reaction between rheumatism and chorea is not very strongly in evidence. Thirteen had a definite history of rheumatism and 150 had no history of it. The authors believe in the relationship between chorea and rheumatism and though they think that infectious diseases may produce chorea, it is not always easy to discover the definite nature of the infection, and the relationship does not seem to be very close. Tonsillitis was not a prominent factor and syphilis, which was found in two of the cases, seemed to have no connection with the chorea. The disease was frequently localized. Endocarditis was frequent but not a constant complication. The mortality was a little less than 1 per cent. The duration of the disease varied from one day to more than a year. The average was from two to eight weeks. There were thirty-five recurrent cases. One patient had four recurrences, four had three and twenty had two. The treatment seemed to have no direct bearing on recurrences. The treatment recommended by the authors is rest in bed and complete isolation, baths and salicylates. They do not believe that arsenic has any special effect and, if given in too large doses, it may be dangerous.

## MORTALITY AROUND FIFTY YEARS.\*

J. H. FLORENCE, M. D.,

Medical Director Great Southern Life Insurance Company, Houston, Texas.†

Medical life insurance is, in a measure, becoming more and more a special line of work, requiring special thought, time and study. The average medical man can easily examine an applicant and record facts as found, whereas, if he had a little insight into the real science of the expectation of the life of the individual case, and the expected mortality of groups, it would be of great benefit to him as well as to life companies. The technical points, classifications, and rating that I shall touch upon may not be actuarially correct, but they are near enough for all practical purposes.

Since the main profit in the insurance business accrues from the savings in mortality, actuaries and medical directors are its very sheet anchors, instead of being merely necessary evils, as the average insurance salesman might lead one to believe. And, in making this statement, I do not overlook the fact that the local examiner plays a great part in the company's savings; in fact he should be, and nearly always is, a bulwark of safety.

Here I am going to digress a little to say that the improvement in the last ten years in the service of the medical examiners is very gratifying indeed.

The calculations of a physician at the bedside of a patient, as to that patient's chances for longevity, are based on what he knows of the one individual case under consideration; the calculations of actuaries and medical directors are based on the knowledge of facts established by the careful consideration of phenomena manifested in thousands and hundreds of thousands of cases. There is this difference between the statements that one man will live thirty years, and that one thousand men of the same class will average a life of thirty years; the first is foolish prophecy; the second practically a mathematical certainty. Hence, in dealing with life insurance work we make the price on the average mortality.

When a case is rated there are many things to be considered, such as height and weight, family history, personal and clinical history, habits, environments, and numerous other vital points that will not be discussed in this short paper. There are certain groups which die around the age of fifty years, and it is with these I wish to engage your attention.

**Heavy Weights.** A man over thirty years of age, and 40 per cent overweight is an increasing hazard, especially if his abdominal measurement is larger than his chest, or, if he leads a sedentary life, is a big eater, or drinks to excess. To this class we offer policies maturing not later than the fiftieth year. This is met by rating the applicant up to the age desired on standard rating, or by giving endowment policies maturing about that age, or a combination of the two. On the other hand, the light weight applicant, other conditions being equal, becomes less of a hazard as time goes on.

**Syphilitics.** It is estimated that in Europe and America the mortality of this class is 188 per cent of the expected, so that in a given one thousand cases insured the average life would be cut short by many years.

Considering the manifold dangers of this disease, and the incomplete cures, it is safe to say that persons so infected die mostly before, or about the age of fifty, as a class. Consequently, in a selected, well-treated case, where the applicant lives an ideal life, and at the same time shows no lesions, we are safe in issuing on his life an endowment with extra rating. If he dies around the age of fifty years the company will at least lose no money, if issued at age thirty on 20-year endowment plan. However, the word "selected," as used above, means a great deal. For instance, the applicant must be free from all symptoms at examination; you should

\*Read in Medical Section, Oklahoma State Medical Assn., May 10, 1916.

†Fraternal Delegate from Texas State Medical Association.



know when and by whom he was treated; the amount and kind of treatment administered; what inroads the disease had made before treatment was started; the present habits of the applicant, his manner of living, etc., in fact, all the information that it is possible to obtain regarding it.

I doubt the practicability of requiring Wassermann or other tests for this class of risks; and I am not absolutely committed to the idea of its being a safe guide to follow if it was done. It seems the findings of this test are not altogether reliable and satisfactory to some good authorities, and until it is, no medical director would be justified in gambling with other people's money upon the longevity, or life expectancy, based upon these tests. I realize I am skating on thin ice here, pathologically speaking.

**Lack of Longevity.** It is strange, but nevertheless a fact, that all the members of some families die early. It is not uncommon to find families of which all the members died around the age of fifty or sixty years, due to lack of vital force and physical stamina to withstand disease. They do not, as a rule die, as you would suspect, from tuberculosis or similar troubles, but mostly from acute disease which attacks them. Their make-up for generations cannot combat disease successfully. Regardless of their height, weight, general appearance and physical condition, the immutable law exists that they are doomed to die early as did their forefathers for generations. In issuing policies these applicants are of course reckoned with to die on an average, as their family history shows, some about fifty, some about forty, and some occasionally at sixty. Applicants who come from families whose history shows lack of longevity cannot be given standard policies, but must be rated up, and if necessary given such policies as mature prior to the expiration of their shortened expectancy.

**Drink Habit.** This is a dangerous class. We know so little, and can find out so little about these applicants' real habits as to the amount of liquor consumed. It has been said that a gentleman will prevaricate about three things only, namely: a woman, the amount of fish caught, and the amount of liquor consumed. Being of tender but lawful age, I am constrained to believe the saying is true, especially as to the latter.

One termed a "moderate" drinker is not now considered actuarially a standard risk. The daily drink before meals on an empty stomach, aside from the deleterious effect of the alcohol on the stomach and liver, causes one to eat abnormally. Then there is the periodical "spree-er" growing worse from year to year, with a tendency to become quarrelsome while under the influence of liquor; there is also the depression of his vital forces, and his liability to accidents, as well as the sexual dangers—all these must be reckoned with. Of course, the man with the perpetual "jag" will not be considered. It would not be safe to issue him a fifteen-minute endowment, or to allow him to gaze upon a John Doe policy without having it nailed down. I have reference to the fellow who, when he passes from the "Vale of tears," will not have to be buried but simply poured back into the barrel.

The longevity of liquor drinkers, as a whole, should be estimated 15 per cent short of the expected. This is not authentic or scientific, but a conservative estimate to be used in selected cases only. When the amount of liquor consumed, and the effects of it on the system, can be reckoned to a mathematical certainty, then the millenium. No company will take an excessive drinker if they know it.

There is one class who die at any age. Actuaries have never been able to figure out the mortality on the policy holder who foolishly mixes his liquor and gasoline. Yea, verily, this kind of fool and his life are soon parted—likewise, some good life insurance company and its money, should be he insured. Gasoline and spirituous liquors won't mix. So much for the automobile speeder which no company takes on its books if it knows it. Unfortunately they get on, however, and drive to their death.

To give a little inkling into the real actuarial figures as to drinkers and non-

drinkers, I beg to submit the following: Roderick Mackenzie Moore, Actuary, read a paper before the Institute of Actuaries on November 30, 1903, which is summarized by Joel G. Van Cise, Actuary of the Equitable Life Assurance Society of the United States, in an address before the Actuarial Society of America. The following are figures given by him: Male lives, non-abstainers—total number of years of exposure to risk, all ages, 466,943; expected deaths by our table, 8,911; actual deaths, 8,987; per cent of actual to expected, 100.4. Male lives, abstainers—total number of years of exposure to risk, 398,010; expected deaths by our table, 6,899; actual deaths, 5,124; per cent of actual to expected, 74.3. These figures are based upon the British standard tables.

**Over-eating.** This is one of the evils of our modern age. The new and idle-rich, the retired capitalist, the pleasure-seeker, the globe-trotter, the society and business man, money-mad, all these and other peculiarities of our great American, latter-day civilization; the man who burns more than he builds by the daily grind, sedentary life, together with heavy drinking and over-eating, who gets a high blood-pressure seemingly without rhyme or reason long before kidney or circulatory troubles can be detected; all these are hazardous risks and have to be reckoned with.

As yet we have no exact scientific data by which they can be rated, but safe to say they can be scheduled to die between forty and fifty, if they begin the pace before thirty or forty, or earlier. All of the above detailed classes are what are called "sub-standard" lives, and are never offered other than sub-standard policies, as it would not be right to issue to them the same kind of policy, at the same price, as to the normal man; hence, they are penalized by paying enough extra to cover the hazard, and confidentially, loaded just a little bit more for safety to the company. For half a century life companies have practiced "Safety first."

Life insurance is not a charitable or philanthropic business, except probably indirectly. Companies are organized, and must be operated, for the profit to the stockholders as well as for the protection of the policy holders. If this is not true we may expect to see the "Mourners go about the streets", and the officers of such institutions leaving for parts unknown.

Realizing the amount of money that physicians receive from insurance companies, we hope to see more interest taken in this work. For instance, over \$100,000 was paid to the physicians of your own State in 1916 for this work. So, thinking that a little insight into the sub-standard lives and ratings would be of interest I give you this to think over, and only hope it may prove of profit to you.

### Discussion.

**Dr. A. D. Young, Oklahoma City:** I hoped the doctor would say more about high blood pressure. It seems this is a subject that has not been thrashed out entirely. It seems that every few days we run across a patient with high blood pressure in which we can find nothing else the matter.

I would like to know whether the arteriosclerosis or the high blood pressure comes first. It is attributed to too much eating, drinking, etc., as the cause. It is hard to believe that has much influence. The question is whether a man should drink more and eat less, or vice versa. I suppose in some the arteries are made of pure material. The people who start out with a poor circulatory apparatus are the ones who are very apt to die at fifty. There is one thing that is apt to happen to everyone at that time. We begin to find we are a little short of breath, a little larger around the waist, and I suppose it is because we do not take as much physical exercise and more mental, but his question of high blood pressure has not been satisfactorily settled, and if it were possible I would like to find out whether the arteriosclerosis comes first or the high blood pressure.

**Dr. Lea Rieley, Oklahoma City:** I would like to ask the doctor something about the pulse pressure. Some companies ask about the pulse pressure. I notice it says it is evidence of cardiac weakness. Other companies pay no attention to

the pulse pressure whatever and do not care for the blood pressure. Others want the pulse, others the systolic pressure. I would like to hear from him further on that subject.

**Dr. Florence**, closing: Dr. Young evidently misunderstood me. I was talking about the man who three times a day drinks big cocktails, the man who is always drinking or drunk.

Relative to blood pressure I could talk a week on that. The doctor says we are just beginning on blood pressure. I would like to have blood pressure in every instance I examined. I visited a man who had blood pressure of 240. I tested it and his blood was 118 pressure. A week ago it was 240. The doctor was looking at the wrong end of the needle. Another doctor examined fifteen men for the company and all of them had blood pressure 115. Gentlemen, if we can get blood pressure and pulse pressure we want it. It is something you have got to learn. There is only one company in the United States who disregards blood pressure, and if they can get it and get it intelligently they want it, but if they are going to read the wrong end of the needle they don't want it. I know most of you can take blood pressure, and if you can all right and well. Pulse pressure is harder to learn. Thank you.

## NEW OPERATION FOR CANTHOPLASTY WITH SPECIAL TECHNIC IN CASES DUE TO TRACHOMA.

(Illustrated)

**DR. DANIEL W. WHITE,**

Formerly U. S. Government Eye and Trachoma Expert,  
Tulsa, Oklahoma.

**DR. PETER COPE WHITE,**

Formerly of the Manhattan Eye, Ear, Nose and Throat Hospital, New York,  
Tulsa, Oklahoma.

The operation of canthoplasty appears to be one of the simplest to perform on the adnexa bulbi to the operator of limited experience who does not inspect his cases months after the operation and also to the clinical observer and we might also, with some hesitancy, without any derogatory criticism, include many of the text books of ophthalmology. The operation *looks perfect* at the finish of the operation and for this reason we believe our enthusiasm at the time is *held* so highly that we do not stop to consider our final result.

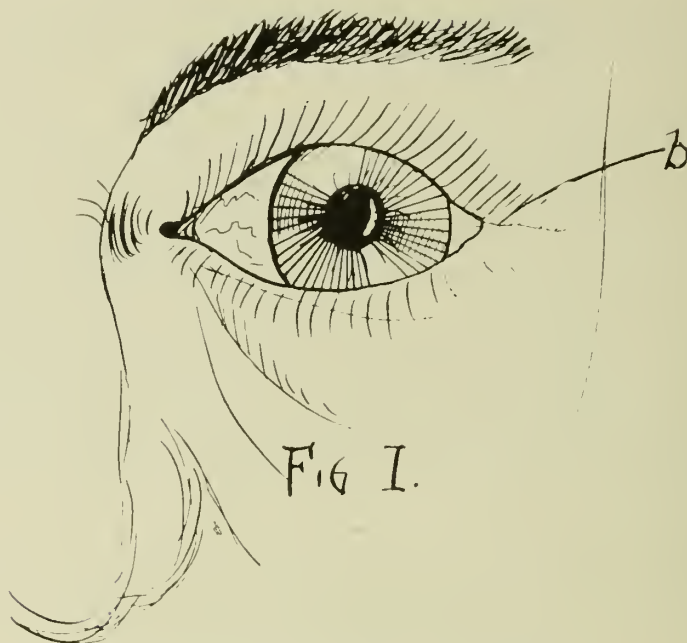
We are writing this brief in order to impress on our readers who have had failures that we present to you an operation for canthoplasty—slight or entire in degree—not an operation known as canthotomy, which we are sorry to relate the operation of canthoplasty very often in a short time resembles. In order to be perfectly understood we will explain the two terms: Canthoplasty consists in an enlargement of the palpebral fissure by division of the outer commissure—Canthotomy is a division of the outer commissure when we only need a temporary dilatation of the palpebral fissure. This operation is also called temporary canthoplasty. The conjunctiva is not sutured to the wound and the wound reunites in a short time. This is what happens in so many operations for canthoplasty.

We have only a few indications for canthoplasty: 1. Blepharophimosis. 2. Ankyloblepharon. 3. Blepharospasm. 4. Chronic purulent conjunctivitis. 5. Gonorrhoeal conjunctivitis. 6. Cicatricial Trachoma.

We present you with a brief normal anatomical study of the lid in relation to canthosis.

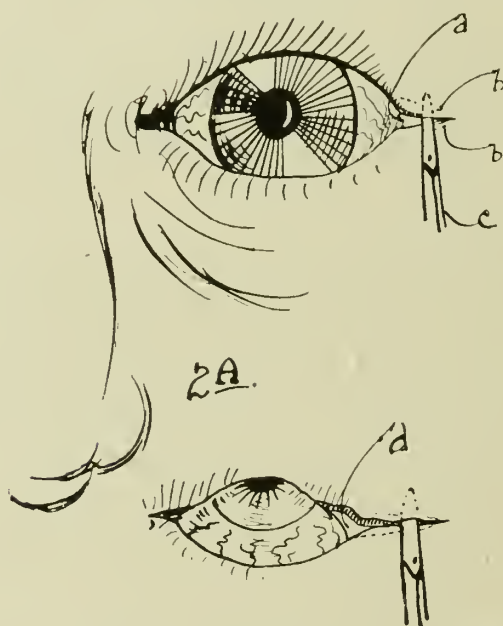
The posterior surface of the eyelid is covered with palpebral conjunctiva (this conjunctiva is almost wholly attacked in canthosis trachomatous) and reflected from the lid on the eyeball. The line of reflection is termed the fornix conjunctivae. The upper eyelid is larger and more movable than the lower, all the transparent





(Fig. 1) b—External canthus showing canthosis.

Fig. 2.



(Fig. 2) Operation a—incision. b—undermining upper. b—undermining lower flap. c—small dissection scissors undermining. (Note) Undermining is deeper at beginning of incision and tapers down to end of incision.

(Fig. 2 A.) Showing slight elevation of flap and flap elevated. Note width of flap at end of incision and beginning of incision. a—raw surface under flap raise. b—raw surface of flap.

part of the globe being covered by it when the eye is closed; it is chiefly by the elevation of this lid that the eye is opened. The outer angles of the lids (canthus) are united. The interval between the two lids is termed the rima palpebraris. The tarsi are two thinned elongated plates formed of dense connective tissue. The upper one is the larger. Their free edges are thicker than any other point. At the outer canthus the tarsi are attached to the malar bone by the external lateral ligament, or the thinning of the tarsus, but in the upper it blends with the tendon of the palpebral levator. The membrane is thicker at the outer part of the orbit where it forms the external lateral ligament. The palpebral conjunctiva is closely united to the tarsus. The ocular conjunctiva at the line of reflexion is thinner and is very lax and easily thrown into folds so that the movements of the eyeball are not affected with trachoma on the palpebral conjunctiva.

The palpebral fascia acts as a fibrous septum between the cutaneous and conjunctival parts of the eyelid at its attached border. Any inflammation of the eyelid will aid in producing canthosis when the inflammation becomes chronic as in chronic conjunctivitis and trachoma or cicatricial formation from burns or the violent and destructive bacterial infections as gonorrhoea. We have also seen pseudo-ptyerium produce canthosis (see Daniel W. White, U. S. Government Eye Reports of States of Oklahoma, Kansas, New Mexico, Arizona and the Dakotas). The change in the tissues are confined mainly to the conjunctiva. The conjunctiva is shrunken and thinned very often into fatty tissues and pulls the conjunctiva with it in its degenerative course (example—chronic trachoma), while in burns and other semi-chronic inflammations the cutaneous surface (skin, etc.) is mostly affected. The conjunctiva suffers lightly in those cases. In paralysis of the lid, due to nerve involvement, we have a canthosis. We also find one in the heavy tylotic (drooping) lid either in chronic conjunctivitis or beginning advanced trachoma of the beef-steak eyelid. "The conjunctiva is connected very closely to the tarsus and the palpebral levator fibres are connected to the tarsus so that disease like trachoma will cause tylosis". (Remarks from U. S. Government Eye Report by Daniel W. White).

We have many mechanical and a few natural reasons for the failure of the operation of canthosis:

We wish to state the one chief reason for the failure of the operation—Dr. Casey A. Wood, who has called this to the notice of the eye surgeon so often—we believe should be commended for his everlasting and commendable knowledge as an anatomist first, then a pathologist and finally a surgeon. He tells us in the operation of canthoplasty we should not only cut the fibres of the external lateral ligament in the line of the incision, but also perpendicular to the incision, that is up and then down from the upper edge of the wound upward and downward from the lower edge of the wound, thus separating the external canthal ligament (see sketch). If you just recall the anatomy you can realize how important this is—we shall repeat:

1. The palpebral fascia acts as a fibrous septum between the cutaneous and conjunctival parts of the eyelid at its attached border (see sketch).

2. The natural tendency of wound edges to reunite.

3. The constant opening and shutting of the eyelids thus causing ambulatory inflammatory proliferation of cells—resulting in healing of the wound edges.

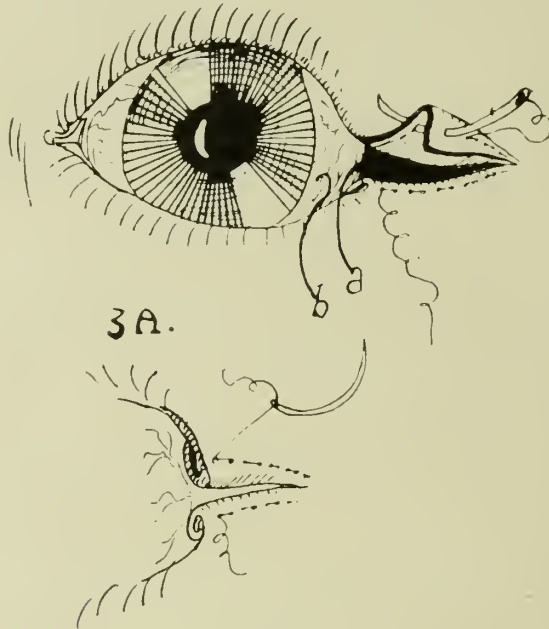
4. The flowing of the tears into the wound, thus preventing infection and causing healing of edges by first intention.

5. Closing of the eye, whether with aid of bandage or while asleep which will cause the edges to rub on each other producing a pressure and regenerative inflammatory irritation.

6. Exposure of the healed surface to wind and dust and cold thus bringing out cicatricial scars of the edges and finally a filling up of the new made commissure.

7. In the movements of the ball, pulling of the sutured conjunctiva and the sutured cutaneous parts (the conjunctiva is shrunken and very often cicatrized).

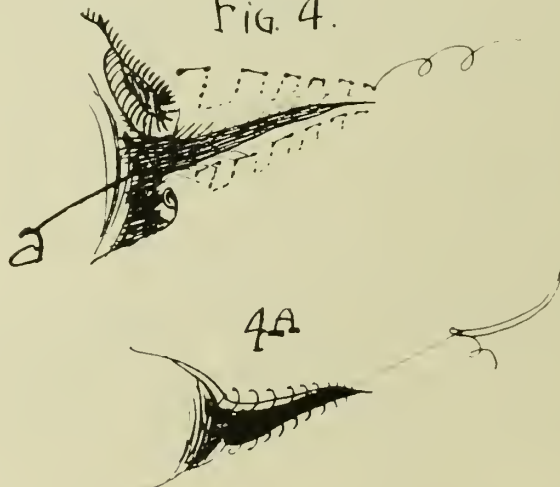
FIG 3



(Fig. 3). Showing upper elevated flap at inner end and flap inverted upon itself at outer end of incision and the placing of sutures in inverted flap. Sutures in place in lower flap after inversion. a—raw surface after separation of upper and lower flap of first incision. b—ocular conjunctiva at beginning of raw surface.

(Fig. 3A). Flaps in place after sutures have been drawn and before conjunctiva has been drawn over to cover raw surface.

FIG. 4.



(Fig. 4). Showing inversion of smooth surface, upper and lower flaps on the raw surface. a—raw surface space. (Note) Unless conjunctiva covers this raw surface, the smooth surface flaps will adhere to the raw surface. This is the cause of failures in this operation. Fig. 4 also shows the running sutures.

(Fig. 4A). This shows the whipped suture, which is much easier than the running suture, as the edges are whipped into place, this causing a smooth surface to be turned in, to be inverted. This method, however, is not as satisfactory as the inverted flap or running sutures.



8. Any time skin or conjunctiva is incised there is always danger of a return of the growth (pterygium) (symblepharon in the burns of eyelid and eyeball) or resulting scars in the skin after an incision. (Daniel W. White and Peter Cope White Reports).

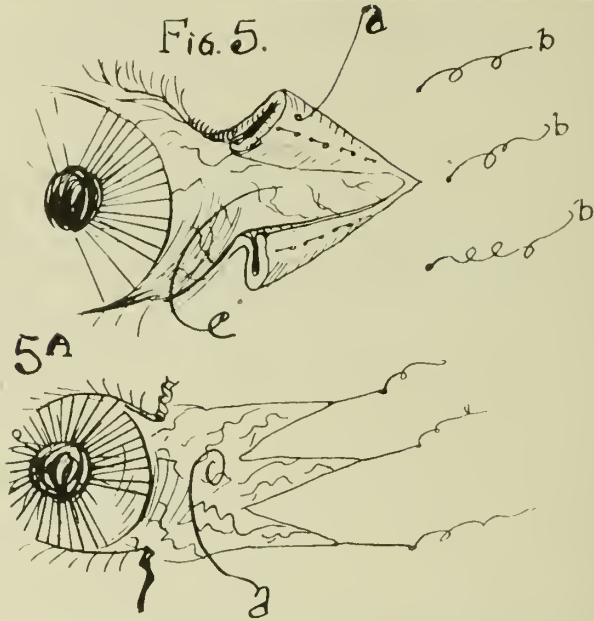
After an experience of one hundred and ten cases we feel justified in offering this operation to our colleagues. We have seen and experienced so many failures in the other operation (see sketch), it has been our aim to remove the pathologic cause if possible and then apply the proper surgical anatomy in our technic. We have made a division of the operation into two parts, the conjunctiva and the skin and sub-tissue parts: Before you start the operation you should inspect the part for the *natural* space between the rima palpebraris and also any ptoses of the lids so that you will not misjudge the physiological aspect of the operation. The transverse diameter of the rima between the canthi is about 28 mm.; if it is less than this, the eye appears smaller and the canthosis is increased, while the size of the eyeball is nearly the same in all cases.

The first step in the operation is to make an indelible (sketch) line on the skin for the incision, so that when you stretch this skin at the outer canthus you will have a guide line for a straight and proper level incision. The incision should be made a little above and extending from the external canthi commissure so that more of the fornix conjunctiva of the upper lid may be easily reached. The skin is held widely apart with the fingers and stretched toward the nose so that the canthus is put on the stretch and then with a blunt pointed scissors or a small scapel a horizontal incision is made through the skin and sub-tissues. A rhomboidal wound is now apparent (sketch or figure) with the apex of the sides of the wound in the conjunctiva and the two outer sides of wound in the skin and sub-tissues. The skin edges are now undermined and dissected back at the outer edges of the wound for some distance—while at the apex or the conjunctival edges of the wound (see figure) the dissection and undermining is more extensive so that the fornix conjunctiva can be reached and also to secure the required post-operative shape and result (figure).

We now have at our disposal two methods of the integument (skin) technic. In the first and the easier method we use a drawn, whipped suture, beginning one suture at the conjunctival apex of the upper edge of the incision and at the same time making the suture deeper, that is to include more of the undermined flap, so that a wider space is obtained and gradually reducing the width of the suture (that is from the edge of the skin to the skin on the face) till the center of the outer edges is reached and then continue the suture from the center to the *lower* edge of the lower incision, gradually increasing the width of the suture and thus inverting the skin more until the apex is reached. Another suture is started at the lower apex edge of the lower incision and is carried to the center and then to the upper apex conjunctival edge in the same manner, in order that we secure the necessary inversion of the skin and the two ends of the sutures at the upper and lower edges of the skin and the two ends of the sutures at the upper and lower edges of the wound for tying purposes. (See illustrations).

The sutures at the skin edges should be very close to each other so as to secure an even and entire inversion of the skin (see illustrations).

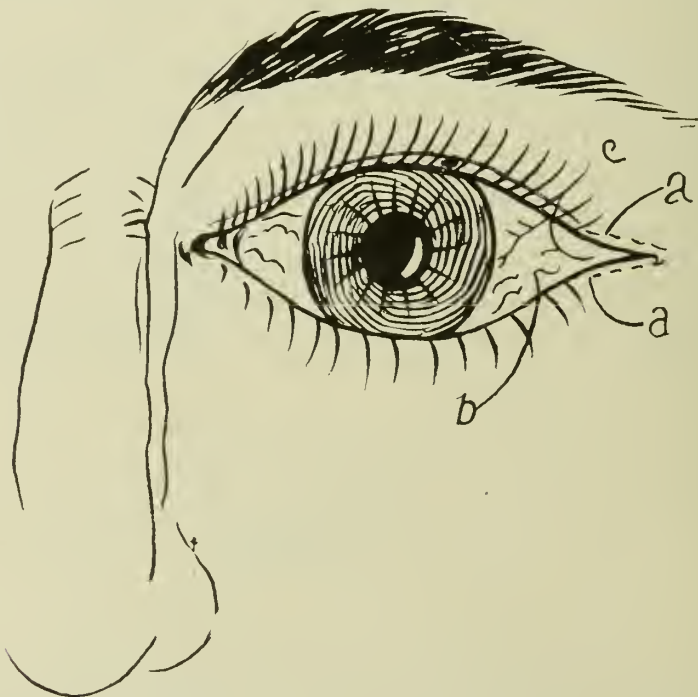
It is now absolutely necessary to divide the canthal ligament in order to make the sides of the commissure draw far enough apart. This is done by seizing the conjunctival border of the wound with the forceps and drawing on it until the resistance of the fibres (canthal ligament) is distinctly felt, then passing the closed blades of the scissors into the wound, feeling for the ligament and when it is found, opening the scissors blade so as just to include and divide it (Hotz). It should now be cut perpendicular to the wound, up and down, otherwise the success of the operation will be questionable (Casey A. Wood) (sketch). We also present our *new* folding or turning in operation on the skin for canthosis. The incision and other steps are taken in the same manner as in the drawn whipped *stitch* technic up to



(Fig. 5). Shows ocular conjunctiva drawn over to cover raw surface. a—smooth (skin) surface. b—Suture ends attached to conjunctiva and drawn out of outer. c—ocular conjunctiva.

(Fig. 5A). a—ocular conjunctiva. b—sutures taken to draw conjunctiva over raw surface and surface completely covered.

FIG. 6.



(Fig. 6). Operation completed. a—sutures in place. b—conjunctiva. c—conjunctiva stretched into new space. Conjunctiva lies beneath the smooth inverted skin flat.

the place when the sutures are introduced. The skin flap is now folded on itself, that is the skin surface is inverted and folded beneath the raw surface, thus causing two raw surfaces to oppose each other and leaving the smooth surface against the raw surface of the wound. The drawn whipped stitch can be used, starting at the apex of the wound and extending to the center and then to the lower apex of the wound, passing the suture through both folds of skin, or a whipped running suture can be used in suturing the folds (see diagram of sutures).

*This* technic has been excellent in very severe cases. Where there are scars on the base the scars should be removed prior to the operation of canthoplasty (see illustrations).

When you cut the ligament you also incise some of the fibres of the upper levator palpebrarum muscle, thus widening the commissure.

The second step in the operation is the conjunctiva—the conjunctiva at the apex of the wound is loosened from the underlying tissues and also for a short distance from the upper and lower lid at the apex of the wound, in such a way so as to reach the fornix conjunctiva in order that when the conjunctiva is put on the stretch no immobility of ball will occur. (The conjunctiva is thrown into folds in the fornix and when traction is made on the palpebral conjunctiva, the movements of the eyeball are not affected).

The conjunctiva at the apex is sutured to the skin last. One suture is used to unite the conjunctiva to the upper edge of the skin and one suture is introduced to unite it (conjunctiva) and the skin at the lower edge of the wound. Both of these sutures should be taken well up and as near as possible to the fornix conjunctiva so as to have a lax conjunctiva at those points. The folds of the fornix conjunctiva will give you *this* laxity. The external angle of the wound is now sutured to the conjunctiva thus covering the raw commissure. By carrying out this technic with the last suture you will not have pulling on the conjunctiva and the mobility of the eyeball will not be interfered with because the pull is on the upper and lower sutures (see illustrations), before the conjunctiva reaches the external angle of the wound, as it is in folds and loose at the external angle of the wound (see sketch). This technic will suffice for the partly shrunken and ordinary cases of canthosis.

*We now offer the technic which we have used so successfully in advanced cicatricial trachoma canthosis.* In trachoma it is often very difficult, owing to the shrinking of the conjunctiva, to draw the conjunctiva sufficiently into the skin wound and suture it there. Kuhnt takes a flap of skin of the lower lid and uses it in the *new commissure*. This has been a big advance, but *it avoids* the pathologic condition and at its best is *not* permanent—as disease in the pathologic lid advances, the less effective this will be.

After an experience of the surgical removal of the tarsal cartilage and the palpebral conjunctiva in 702 cases for advanced cicatricial trachoma, we find the mobility of the ball is not lessened and the movements of the eyelids are improved. In almost every case the patient can open the lid wider after the operation than before the operation. (See article Ophthalmology 1915—Removal of the Tarsal Cartilage and Palpebral Conjunctiva, by Daniel W. White and Peter Copc White). We state this so that the operator *will not* be timid in following out our technic.

The tarsal cartilage and palpebral conjunctiva are removed. The fornix conjunctiva is stretched toward the outer canthus and the suture is now placed a little to the inner of the outer canthus, thus giving the conjunctiva at the outer canthus a little more play, thus increasing the already apparent folds and overcoming the shrinking. After the removal of the tarsus and conjunctiva—there will be no apparent shrinking of the conjunctiva at the outer canthus and it can be sewed very easily to the wound. If the operator only has shrinkage of the conjunctiva without trachomatous tissues, he can remove the tarsus only and then complete his canthoplasty (sketch). We have performed this (removal of only the tarsus) in a number of *terotic* cases with good results.

It is very important for the operator to consider the pathology of trachoma in



those cases as it is *evident* the pathologic lesion will continue in the tarsus and conjunctiva and *unless* the cause is *removed* the success of the operation will be very doubtful.

In removing the tarsus from the conjunctiva, you remove its (tarsus) close connection to the conjunctiva, thus giving the folds of the fornix conjunctiva a chance to aid in making and keeping the new fissure open. "After the tarsal cartilage is removed the canthosis is always helped, due to the weight of the tarsus being removed". (U. S. Government Eye Reports of Daniel W. White).

*The removal* of the tarsal cartilage or the removal of the tarsal cartilage and palpebral conjunctiva should be done for at least one month before the canthoplasty if the patient will submit to two *operations* at two sittings. The results are always better—this also applies to entropic or ectropion operations, *where* it is necessary to do them *after* the removal of the tarsus and palpebral conjunctiva. We also wish to state the canthosis is improved in some cases 50 per cent after the tarsal and conjunctival operation. It has been our experience for the patient not to return for the canthoplasty *due to* the improvement from the *combined* excision operation. (Removal of tarsus and conjunctiva).

---

### TUMORS OF LONG BONES.

DR. JOHN A. BROOKE, Oklahoma City, Okla.

In the early recognition of bone tumors and allied conditions the X-ray plays a most important part. We can now often diagnose bone lesions and individualize in their treatment with an accuracy undreamed of in the pre-Roentgen period, yet we are frequently led into error if we attempt to make a diagnosis from the skiagram alone. The tendency is to look at the X-ray plate first and make a diagnosis without considering the clinical evidence and it is then difficult to give the clinical side its real importance after another source has biased our opinion.

Of the non-malignant lesions of long bones, osteitis fibrosa cysticus is the one that is most frequently encountered. Osteitis fibrosa is sometimes called Von Recklinghausen's disease and it was first clearly described by this noted German pathologist in 1891. He considered it a systemic disease of bone with a fibrous hyperplasia and cystic degeneration.

It is mainly a disease of early life, by far the greater majority of cases occur in children and young adults. It begins in the shaft of long bones, never in the epiphysis.

Nothing positive as to the cause of this affection is known. It may be due to a chronic infection or to a disturbance of balance of the internal secretions whereby the bony tissue is destroyed and replaced by new tissue which is poor in lime salts. Murphy says "The humerus at its upper end is the most frequent seat of the disease". This report is different from that of other observers who find the femur most frequently involved. In all but one of our cases, the femur was first affected.

Osteitis fibrosa is usually a painless affection and is apt to escape notice until considerable of the shaft is involved and there is either a fracture or change in contour of the shaft with bending or distortion. The power of walking is not greatly interfered with, possibly a limp is all that is noticed. The occurrence of a spontaneous fracture or one from slight injury in a young individual should immediately give rise to a suspicion of osteitis fibrosa, hemorrhagic osteomyelitis or sarcoma.

The X-ray shows an even fusiform enlargement of the affected bone with many small areas of rarefaction, which have the appearance of pockets or cysts. The bone enlarges uniformly and there is no invasion of the surrounding tissues. The area involved is sometimes coarsely striated and looks somewhat honeycombed. In cases of long standing a great portion of the shaft may be involved and several of the long bones affected.

Osteitis deformans, or Paget's disease, is another systemic bone lesion, which is frequently confused with osteitis fibrosa. Osteitis deformans is a disease of old age and in persons who are prematurely old. It is a combination of rarefying and formative osteitis. The bones first soften and bend, then become hard, compact and increased in size. The shaft is sometimes enlarged to five or six times its normal width. The tibia is usually affected first, later even the bones of the skull become thickened.

The radiographic picture is a very different one from that of osteitis fibrosa; it shows lamellar thickening and areas of rarefaction with apparent periosteal overgrowth not unlike that present in syphilitic osteitis. The cortex is greatly increased in breadth with areas of marked density and obliteration of the medullary canal.

Late manifestations of tertiary and hereditary syphilis may show somewhat a similar X-ray picture to that of osteitis deformans and chronic osteomyelitis. In syphilis we have a thickening of the periosteum with a furring. In chronic osteomyelitis and osteitis deformans a laminated appearance. In chronic osteomyelitis there is great irregularity of the shaft with light and dense areas due to bone destruction and bone proliferation. In syphilis we often have small areas of rarefaction with a round cap of dense bone raised above the line of the normal shaft. These are known as bone blisters. In syphilis the outline of long bones is lumpy and nodular. In congenital syphilis with these bone manifestations the patients are young, with osteitis deformans they are old. In syphilitic bone lesions pain is usually present and is continuous, boring and worse at night. The sabre tibia is characteristic of congenital syphilis and is due to cortical thickening and calcareous deposits beneath the periosteum. The sabre tibia is an even curve of the whole shaft with the convexity forward, while in rickets the curve is short and involves just a portion of the shaft.

In aggravated cases of rickets we sometimes have a condition of the shaft of certain long bones that gives a radiographic picture resembling osteitis fibrosa in its early stages. In a case of rickets under our observation, the lower half of both femora were broadened, rarefied and porous with rather well marked vacuoles filling in the space between the thinned cortex. But it had also the indistinct epiphyseal line so characteristic of rickets. The end of the diaphysis was ragged and hazy and there was delayed ossification of the epiphysis which casts little or no shadow.

Osteochondrofibroma is a rather rare bone lesion but its radiographic appearance is similar to that of osteitis fibrosa. It has the same honeycomb appearance as osteitis fibrosa only the vacuoles seem larger and the tumor is more expansive. We have observed but one case, a boy of twelve, whose general condition is very good. He has limped since he first started to walk. There is no history of injury, no tenderness or pain in the affected limb. There is marked lateral bowing of the left femur with one and one-half inch shortening of the leg. In this case the X-ray shows a marked hypertrophic disease of the upper end of right femur and involvement of upper half of right fibula.

On removal of this growth it was found to be of bluish white color and was of firm consistency. Microscopically it was made up of fibrous tissue with circumscribed areas of cartilage.

Hemorrhagic osteomyelitis of Barrie, or the so-called bone cyst, has received a great variety of names, most of which are entirely misleading. It is often called giant celled sarcoma, myeloma and the medullary giant celled tumor of Bloodgood. This is a local lesion whereas osteitis fibrosa and osteitis deformans are systemic ones. Hemorrhagic osteomyelitis is a non-malignant, expansive bone tumor. It occurs most always in the ends of long bones near the epiphyseal line. In a certain few instances it has extended into the edge of the epiphysis. The lesions vary in size from that of a coffee bean to even larger than one's fist.

In a large number of cases reported the ages ranged from three to sixty-three. But this disease occurs much more frequently in children and young adults. No

cases have been reported in negroes. Pain is a rather constant symptom, and sometimes moderately severe and of a deep boring character, occasionally crampy. In osteitis fibrosa pain is rarely ever present. Most cases of hemorrhagic osteomyelitis have a history of trauma, some months before the onset of symptoms.

Until recently all cases reported were of single bone lesions but within the past two months Hanseling and Martland of Newark report a case involving both clavicles, both tibiae, right seventh rib and right femur just above the knee.

At an operation there is rarely ever found a lining membrane. In a few instances the contents of the tumor was a straw-colored fluid but in the great majority the interior resembles granulation tissue and bleeds readily. It looks not unlike red currant jelly. It is a picture of granulation tissue with disorganization of bone trabeculae and numerous giant cells. Microscopically the body of the tumor consists of short spindle cells. Barrie's contention is that this condition is an inflammatory process.

It is because of the presence of these numerous giant cells that this lesion has frequently been called giant celled sarcoma. It does not occur after complete removal and does not form metastases. The Von Pirquet and Wassermann tests are negative in nearly all cases.

The X-ray shows a rarefied area with a definite and distinct outline. The area involved is clear and shows no vacuoles; there are no small sections or subdivisions.

The early clinical symptoms of sarcoma of long bones are very similar to those of the benign bone tumors just mentioned. In fact the diagnosis is often so difficult that one with so great an experience as Dr. Coley says: "That the differentiation between malignant and benign bone tumors often can not be made either from their gross appearance or from their microscopic picture".

Sarcoma involving long bones is of two types, periosteal and medullary. As a rule the intra-medullary growths are soft, while most of the periosteal tumors are firm and hard, some producing osteoid tissue and new bone.

Sarcomata usually begin in the same location as the benign growths; that is near the ends of long bones. Benign tumors originating in the diaphysis practically never pass the epiphyseal line, while malignant tumors show no such limitation. Pain is present in the majority of cases. But a pathological fracture or one from slight injury may be the first sign that calls attention to the bone lesion. Again in other cases the enlargement of the bone is first symptom noticed.

The sarcoma has a tendency to remain local longer than carcinoma. Murphy says: "Of thirty cases of bone sarcoma observed at autopsy sixteen, or more than half, had no metastases demonstrable". Sarcoma is far more common in the lower extremity than the upper. The femur is involved in over fifty per cent of cases. Hemorrhagic osteomyelitis and osteitis fibrosa occur mainly in children and young adults, while sarcoma occurs at any age, although perhaps the greater number of sarcomata are present between the ages of twenty and thirty.

The diagnosis can often be made early by the history and aid of skiagrams. If still uncertain a small portion should be removed for microscopic examination. The X-ray shows that irregularity is the dominant feature in the outline of sarcoma, especially the periosteal type. The central tumors are expansive and are uniformly enlarged until they break through the cortex. In certain cellular types the destructive element predominates; there is no enlargement nor bone proliferation. The X-ray shows a punched out appearance, the cortex and periosteum are thinned out and frayed and lost entirely in the picture. In our experience this usually signifies the mixed celled sarcoma of the small round and spindle celled variety, which are rapid growing and very malignant. Other types show much enlargement of the shaft and lots of bone formation. Some have the radiating spicules or columns of bone sticking out from the shaft like bristles. Murphy considers this very characteristic of periosteal sarcoma. Rapid changes in size and character of the tumor, as shown by frequent radiographs indicate malignant growth.



Carcinoma of long bones is almost always secondary, while sarcoma is usually a primary lesion. Bone carcinomata occur more frequently in the ribs and spine. It is apt to be a metastasis from carcinoma of the breast, thyroid or prostate. In fact the secondary bone lesion is sometimes discovered before the primary malignant growth is recognized.

Sometime ago a case was referred to us for treatment of disease of the spine. The radiograms showed numerous lesions in ribs and spine, which were very likely carcinomatous. On examination of the breast we found a well developed mass, which had not been recognized before.

The usual X-ray picture of carcinoma of long bones is one with a single lesion or multiple ones along the shaft with only a slight enlargement, but a distinct rarefaction and mottling.

Osteomata of long bones usually arise from the periosteum. They are most always hard and ivory like. They may be single or multiple. They are slow growing and usually painless. They are of uniform character and apt to be pedunculated. There is an hereditary tendency, and many members of the same family often have these bony growths.

The radiogram shows them to be ordinarily of the same density as the bone from which they spring. Their favorite location is near the ends of long bones. They are non-malignant.

Chondromata are fairly common. Virchow thought they sprang from the remnants of cartilage cells at, or near, the epiphyses. They are like the exostoses inasmuch as they may occur in certain families for generations. They are often multiple and usually become partly calcified. The most common locations are at the lower end of femur and upper end of tibia, or at the lower angle of the scapula.

In the radiogram they appear as coarsely striated tumors somewhat pedunculated with a top that looks not unlike a miniature sheaf of wheat, or sometimes resembling a head of cauliflower. They are non-malignant.

---

### FEVER IN INFANCY.

Fever of obscure causation in infants and young children, which is so often met with, forms the subject of an article by E. P. Copeland, Washington, D.C. (*Journal A. M. A.*, Nov. 4, 1916). He emphasizes the role of the nervous system, especially in patients who, from defective prenatal conditions or otherwise, come in the class of so-called neurotics at an early age. They are especially prone to rises of temperature from trivial causes and the family physicians learn this peculiarity and are said by the parents to "know their constitutions." Copeland says he has met several such cases during the past year and made his diagnosis only after a lengthy study and no little anxiety, "not knowing their constitutions." Another class of children showing febrile manifestations are those in which he attributes the symptoms to focal infections from dental caries, and still others in which obscure inflammation of the middle ear or of the tonsil is the cause. These are known to be old offenders, but he calls attention to the fact that middle ear inflammation may in itself be even more obscure than generally supposed, and that the tonsils may be likewise sufficiently infected as to cause fever, without the visible changes usually observed. He has made a special point lately of examining such possible antecedents of the not readily explainable febrile attacks so often observed in infants and young children, treating them accordingly.

## TREATMENT OF FRACTURES OF THE FEMUR.\*

GEO. A. KILPATRICK, M. D., McAlester, Okla.

The matter of first importance in the treatment of fractures of the femur is to secure first a perfect limb; and, secondly, the comfort of the patient while under treatment. None of the methods in general use pretend to secure either of these ends in oblique fractures. The large mass of muscles, and the length of the muscles extending over and influencing the length of the obliquely fractured thigh, renders it necessary that some other agent than the apposition of the fractured points should be used to prevent shortening.

Lateral supports are worse than useless in oblique fractures of this bone, inasmuch as they force the soft parts upon the projecting and lapping ends of the site of fracture and exaggerate the irritation, and thin the soft structures by absorption. Extension by fixed, extending bands, as those used in the long straight Liston splint, or the inclined plane, cannot maintain the extension, since the bands are more or less extensible, and the structures upon which they are made to press are yielding. And, again, it is true that the force applied in extending a thigh during the first dressing is rarely sufficient to give its normal length.

Everyone who has used the long splint knows that it is frequently necessary to renew the extension, and consequently the relation of the fractured ends are often disturbed. So universal is the shortening after union of oblique fractures that the best authorities agree that in the adult a perfect recovery is never made. This is not in the least surprising when fixed extension is used. The objections to the long splint are numerous. The position of the limb is most unfavorable to equal relaxation of all the muscles; consequently the muscles, flexing both the leg and the thigh, are put upon the stretch while the extensors are relaxed, the flexors tending to shorten the limb, the extensors allowing deviation from the proper line.

The perineal band is so generally productive of trouble that the genius of the profession and the tact of the attending surgeon have been and are taxed to the utmost to provide means to avoid excoriations. Many devices have been suggested to make the perineal band bearable and all have failed in affording comfort. The constrained position of the patient's whole body, requiring him to lie during the entire treatment on his back, and all the inconveniences that attend this position.

The inclined plane is less objectionable in some respects and more so in others. It gives a better balance of relaxed muscles, a more comfortable position to the limb, has no perineal band, but the calls of nature can not be met without greater disturbance. The Buck's extension by weight and pulley is a vast improvement on fixed extension; while to Nathan R. Smith of Baltimore is due the credit of indicating the best principle for the management of fractures of the thigh, that is by suspending the limb, semi-flexed, from some remote point, and allowing the weight of the limb, with the obliquity of the suspending cord, to accomplish the required suspension. The wire suspension splint designed by Dr. John T. Hodgen of St. Louis in 1866. The Hodgen splint is especially useful in compound fractures, for the ready access it gives to the wound for dressings. It can be used in any fracture of the femur from the intra-capsular of the neck to that of the condyles.

I have used this method of treating fractures of the thigh in every case coming under my care for the past ten years and have never had a bad result, never a case of ununited fracture or of union very long delayed. The cases treated represented nearly every variety of fracture of the femur including those of the neck and condyles and many compound and comminuted fractures.

To enumerate briefly some of the advantages of this apparatus, it is cheap. Any one can make it out of a piece of iron wire and a piece of twine. It is easily, quickly and painlessly applied, it avoids the necessity of the painful pulling by

\*Read before Section on Surgery, Oklahoma State Medical Association, May 10, 1916.

assistants in setting the fracture for the fracture sets itself. There is no injury to the skin from perineal bands, or ulceration or trouble with the heel, so apt to occur when the part is concealed.

The limb can be inspected and you can be sure of the condition of the wound in compound fractures and that the parts are well in apposition without much disturbance as the fractured part is always exposed.

The vessels of the part are not diminished by retentive and of course compressing apparatus, it thus allows a full blood supply to the part and diminishes the danger of non-union. The patient may sit up or lie down at will, without the fear of disturbing the fracture, thus preserving the general health and making bed sores impossible.

The parts being suspended on strips of muslin are always kept cool, or, if necessary to the comfort in winter, the limb is easily wrapped in flannels or other clothing.

### Discussion.

**Dr. Blesh, Oklahoma City:** Mr. President and Gentlemen: I have some hesitancy in discussing this paper read to you by Dr. Kilpatrick for the reason that he has had so much more experience in this particular field of surgery than I. I may say truthfully that he has had more experience in surgery of this kind than any man on the east side of this state. He has had many opportunities to observe the different facts and different results from different modes of handling these fractures. He has often discussed with me the trying out of the different ways of handling these and has finally settled upon what is known as the Hodgins splint. The results have been unquestionable. I think he was perhaps modest in not telling you something more of the fractures of the neck; one case being as old as eighty years of age, with recovery. I just say that in justice to his mode of procedure. My opinion has been in favor of the Buck's extension in some form. I think it is referred to as the railroad splint in which plenty of weight is put on the foot, the balance being put on the femur after the splint is put on so that they will hold well, even if they have to go beyond the point of fracture because the pulling will overcome the soft parts even though the splints go beyond that point that unites with the fractured point on the inside. It is absolutely idiotic to put on ten or twelve pounds of weight and expect that to result in a union of the fractures without great shortening and deformity. It must be large enough—25 pounds of pressure if necessary. These cases should be handled promptly under anesthetic. The physician must keep track of those cases every single day. It depends upon the intelligence of the patient after he is put to bed and of the nurse. I get around every morning and see that he is properly placed. It may be that his foot is down against something and he is not getting the extension that you wish. You must have the co-operation of the patient.

I recall a gun-shot wound that I handled, doing the Buck's extension. In that case the main object of the patient was to get over it with just as little pain as possible. The nurse frequently found him reaching over and pulling the strings loose and keeping the weight off of his leg. The result was a deformity that was not at all good looking, but the patient was satisfied.

Dr. Kilpatrick did not say anything about plaster. I may refer to plaster. If plaster is used, it must be used by somebody who will put it on under the proper conditions. Take the average case. Under the average circumstances in the home in connection with fractures of these bones; the average case may not be put up in exactly the right condition if the plaster is put on in the right way. There is no doubt at all that if the plaster is properly put on these patients until well, that good results will ensue. The plaster put on by the careless man may do irreparable harm by being put on in the wrong way. That is a condition that very often comes up, and we see bad results.

**Dr. Ross Grosshart, Tulsa:** I have been very much interested in this paper on "Fractures of the Femur". It is a subject that every physician as well as sur-



geon meets with directly. I only wish to discuss one aspect of the subject and that is the subject of shortening—what is it due to and how is it to be avoided? Then I wish finally to say a few words relative to the use of plaster.

Shortening is due, as I take it, after—or let us assume that the limb is properly set, which is the first fundamental proposition that we do to get the required coaptation of the fragments. When the limb is properly set, I take it that the broken ends of the bone eventually undergo a degree of shortening and the continued muscular action of forcing the two ends together finally result in a shortening which seems to be always in the cases of a fracture of the femur.

The Buck's extension to me in later years has become a joke in view of the fact that this shortening occurs in the manner I have described. We may put weight enough on this leg, but when does the actual shortening occur? You will measure that leg and find it probably longer than the other leg but the patient will come back to you in three months time and will have 3-8 or 1-2 inch shortening; so I say that if that patient has been dismissed from your care without shortening, that is not proof that that leg will remain in that desirable condition. Invariably shortening, I believe, will occur.

Then the second thing I want to call your attention to is that we must have good coaptation to check that shortening. Take pains then to see that there is proper coaptation; if there is a little sliding by of the fragments, there will be some immediate shortening. This is different from the shortening I referred to awhile ago; this will be short from the start. That should be overcome. There is only one absolute test as to when we have a properly coaptated bone and that is the X-ray.

As to plaster, I have come to believe that plaster properly applied is the ideal splint—underscore the word *properly*, of course. When such a plaster is applied properly, it immediately ceases pain of the limb, no matter what position the patient may assume. Such patient may be gotten out on crutches in two weeks time.

I had a case of a fireman with a fracture in the upper third of the femur. He was on crutches coming to my office in three weeks from the time this fracture occurred. The plaster has been removed and good results are evident and at the present time there is no shortening at all, but there certainly will be a shortening of at least 1-2 inch in this leg as time goes on.

**Dr. Robt. S. Hull**, Oklahoma City: I have used plaster-paris exclusively for the past seven years in the treatment of Fractures of the Femur. I have had 45 cases of fracture of the neck and can report over 90 per cent excellent results. I think in five cases only has there been deformity and shortening, but not to exceed 1-2 inch in any case.

With reference to fractures of the shaft of the femur, they are more difficult to handle. Buck's extension, as Dr. Grosshart has said, is a joke. It does not make any difference whether you use 50, 75 or 100 pounds. In the majority of cases it is impossible to control the muscular spasms and to prevent shortening. I recently saw one case in which sixty pounds of extension had been applied and it had resulted in two inches shortening.

My present plan of procedure is to give the patient an anesthetic; reduce the fracture and to immobilize it and fix it by a long plaster-paris spica extending from the nipple line to the tips of the toes. At the end of three or four weeks I remove the spica and know either by means of X-ray or by measurements, or both, that the fragments are in apposition and if necessary give an anesthetic to make the necessary correction. I then apply another long plaster paris spica. At the end of three or four weeks sufficient callous is thrown out to prevent any displacement when once corrected.

I recently had a case of a man who was knocked down by an automobile. The femur was fractured in the middle third. I had him in bed with Buck's extension with 40 pounds weight. At the end of three weeks there was two inches shortening. Under an anesthetic the shortening was corrected, a long spica applied and a

perfect result secured. If one becomes familiar with the use of plaster-paris, it is my opinion that he will use it to the exclusion of anything else, in the treatment of these fractures.

**Dr. W. H. Livermore, Chickasha:** Fractures in general are more interesting to doctors than we really figure; for instance, fracture of the thigh. I want to emphasize what Dr. Hull has just said on the importance of anesthetizing and reducing these fractures. Personally, I would not attempt reducing a fracture of the thigh and putting on a splint without an anesthetic, because the whole thing as to the treatment of your case may hinge, whether it is a short case or a long drawn out case, on the first dressing that you put on.

The plaster, to my mind, is the ideal dressing. But it must be applied right. Of course, to apply this right you must have the proper preparation to put on the plaster-paris right. You cannot put on plaster from the nipple to below the knee if the man is not on a bed or table so you can get around him.

There is another thing I want to bring out and that is the X-ray, because it is going to come up and is coming up and you will find this. The X-ray has shown us that many of our bones, especially of the femur, are not in perfect coaptation. That does not mean that the man has not a good leg and if this should come up in a case for damages, and sometimes it does come up where the patient has not paid his fee, the party may have a good leg and produce a plate that he has had taken somewhere and show this to a jury; the laymen think those bones should absolutely be in apposition. You can look in that X-ray and find a great deviation from normal and still have a functional leg.

**Dr. Kilpatrick, closing:** My paper referred especially to fractures of the thigh, but I have had several intra-capsular fractures and the results have been perfectly satisfactory. We have not been able to check these up with an X-ray.

With reference to avoiding deformity by shortening; if there is no displacement of the fragments, there will be no shortening, that comes from contraction of the muscles.

The Smith idea is suspension from a remote point suspending the limb in a semi-flexed position. I have a patient in the hospital now who went there on May 2nd and he is now sitting up and getting around all over the hospital. In fractures of the middle third of femur I can see where plaster would be an ideal treatment if properly applied. Fractures of the lower third should be splinted from the heel to a fixed point and for action of the gastrocnemius, the semi-flexed suspension position covers the ground, and after all is said and done that is where the patient has the pain. In my opinion it is these muscular contractions that causes the displacements and the shortening.

### THERAPEUTIC RESEARCH.

Torald Sollmann, Cleveland (*Journal A. M. A.*, Nov. 11, 1916), reports the work of the Therapeutic Research Committee of the Council on Pharmacy and Chemistry of the American Medical Association, during the year 1912 and during the first half of 1916. The subjects of research for each period of each year and the authors undertaking them are given with the results or conclusions so far as brought out. The subjects are numerous and only one or two can here be specially enumerated. Among the investigations are those on the natural and synthetic salicylates, between which no differences were found. The duration of digitalis action; intestinal antiseptics, and numerous other studies bearing on the value of drugs which have been more or less employed during past years, as well as certain clinical problems. A number of other problems are being studied and the results of some studies are nearly ready for publication, while still more problems remain to be solved.

## ANAESTHESIA.\*

JAMES T. RILEY, M. D., El Reno, Okla.

The history of anaesthesia goes back as far as the history of surgery, for, an anaesthetic state desirable for a patient about to be cut or cauterized suggested itself to those who first used the scalpel and the burning iron upon their fellow men.

Homer and Herodotus both make mention of a drug, "an antidote to grief and pain, inducing oblivion to all ills". Dioscorides Pandanius, in the first century, mentions an infusion of the mandrake, a vegetable product allied to our belladonna, which was used before operations of the knife or actual cautery that they might not be felt. Hoa-Tho, a Chinese physician, in the third century gave his patients a preparation of hemp, which rendered them insensible to the pain of surgical operation. From the poets of the middle ages, we read of an inhalation of that time, by means of which the surgeons were able to reduce their patients to at least some degree of anaesthesia previous to operations, but it is clear that there was not any really successful methods of preventing pain during surgical operation after the Revival of Learning, or it would not have been forgotten or fallen into disuse. Chemical research in the 18th century brought about discoveries which have culminated in our knowledge of the anaesthetic agents of the present day. In 1758, Dr. Micheal Morris explained the method of preparing sulphuric ether to a society of physicians in London. In 1772, Priestly added nitrous oxide to the list which already included oxygen, nitrogen and nitric oxide.

1846 was the eventful year when Dr. Martin tried sulphuric ether, instead of oxide gas, upon two dental cases and then gave public demonstration in Boston General Hospital, Oct. 17th of that year, while Dr. Warren operated, and this time the anaesthetic was a complete success. Chloroform was introduced in 1847. Nitrous oxide in 1844. Ether was prepared and used medicinally one hundred years and nitrous oxide seventy years before they were tamed and broken to surgery. This delay was not due to lack of acuteness and observation on the part of our profession as much as to the strong repugnance of patients to submit to experiments while physiology was so little understood.

Our practical use of anaesthetics at the present time unmistakably has arisen more from the use of mandragora of the ancients than to the knowledge of therapeutic gases gained by the physicians of the 18th century, for inhalation is a development, after rapid absorption by the pulmonary circulation had been shown by those who made gas, ether and chloroform possible for the surgeon's use.

The successful administration of an anaesthetic depends primarily upon the prevention of obstruction to the performance of efficient respiration; secondly, upon the regulation of the dose of the chosen drug and, thirdly, upon the maintenance of adequate circulation, blood pressure, vitality, temperature within the patient's system, and various contingencies that may arise during unconsciousness.

In the choice of anaesthetics a surgeon often needs not only unconsciousness and anaesthesia but complete muscular flaccidity in the operation area, and such a depth of narcosis that no chance of sudden reflex movement, rigidity, coughing, retching, nor vomiting should exist. In certain operations on the air passages there is needed a retention of a lighter degree of narcosis in which though the patient retains the coughing reflex when the airpassage is excited, he is nevertheless too deeply anaesthetized for vomiting to arise. The effect of the anaesthetic must not be too depressing during a long operation, nor must it raise the blood pressure too greatly lest delicate manipulations be retarded by hemorrhage.

In anaesthetics the actual problem is not so much the proper dosage as the avoidance of many forms of obstruction to the air entry. The preventable, but often overlooked, presence of varying degrees of undercurrent anoxaemia is the cause of most of the difficulties which are found in securing tranquil anaesthesia

\*Read before the Surgical Section, Oklahoma State Medical Assn., Oklahoma City, May 10, 1916.



and of a large percentage of the fatalities which have occurred in the past in connection with anaesthetics.

We find that in passing into anaesthesia, tonic contraction of the masseter muscles almost invariably occurs which closes mouth and the airway. Experience has shown us that a large percentage of otherwise healthy persons do not possess clear and unobstructed nasal passages. We have also noted that for several causes the lining membranes of the airways are liable to swell during anaesthesia and the calibre of these passages to be reduced while the presence of increased mucus secretion from their surface further acts as a mechanical obstruction to the entry of air. When relaxation supervenes, the lower jaw is no longer held in place by the masseter muscles but tends to fall backwards and obstruct the oral and nasal respiration, unless held forward by the anesthetist. The tongue is also paralyzed in the third or surgical degree of narcosis and in varying degrees tends to gravitate towards the nasal pharynx and obstruct the entrance to the larynx. Laryngeal spasm is a quite common occurrence in anaesthesia and may be caused by the direct irritation of a too strong vapour presented for inhalation, or by saliva, mucus, blood or pus finding its way towards the upper laryngeal aperture or reflexly just preliminary to the act of vomiting, or as a result of distant surgical stimuli.

It is therefore necessary that we maintain first a clear airway in the anesthetized subject. We must feel or hear every respiration made by the patient, the mere watching for thoracic and abdominal movement is an inadequate safeguard, as the movement continues after obstruction of the air passages has taken place. If nasal respiration be inadequate to preserve a good color, I open the mouth and insert a small mouth prop between the teeth and the gums. To correct stertorous breathing, I raise the chin, push the mandible forward and maintain it in that position until by digital pressure upon the ramus in order to carry the base of the tongue away from the pharynx. If this does not relieve the stertor, the position of the head is altered, turned more to one side or farther backwards until altered sound of breathing shows that the airway is cleared. Should stertor still persist, I draw the tongue forward gently and in obstinate cases, if this does not relieve, the throat is sponged out. A squeeze upon the sternum also clears the airway.

Pushing the jaw well forward, rubbing the lips and deepening the anaesthetic relaxes spasms from vomiting. Reflex spasms from surgical stimuli can most times be diverted by rubbing the lips and pushing the jaw forward while the surgeon momentarily desists from his manipulation.

It is necessary to make absolutely sure of the exact degree of the narcosis at any and all moments of anaesthesia. This calls for constant watching of the respiration and circulation. Strong surgical stimuli requires more profound narcosis and vice versa, hence the depths of anaesthetic must be adapted to the requirements of the surgeon. We should be at all times aware of all major acts of the surgeon, of any complications such as hemorrhage or the need of operative procedure other than that at first contemplated which would lengthen the anaesthetic, for it depends upon us to decide whether the patient's condition is such that other means may be safely undertaken.

We find that rapid breathing in the first and second stages is caused by nervousness of the patient. When it occurs in the third stage I always associate it with need of more air and less anaesthetic. Deep breathing is the safest type of respiration unless it becomes irregular, keeps increasing in depth or the amplitude of the chest becomes exaggerated. Shallow form occurs most commonly under chloroform and generally means too light an anaesthetic, though when the corneal reflex is abolished it is a sign of approaching paralysis of the respiratory center as an asphyxial factor. It is corrected by deepening of the anaesthetic, rubbing the lips in early stages of the anaesthesia or by withholding the anaesthetic and making regular pressure upon the sternum in the third stages. Irregular breathing, excepting in the early stages of grave significance, is treated with withdrawal of the anaesthetic and careful supervision of the freedom of the airway. Regular and too

deep respiration shows respiratory center is gorged with venous blood or air-passages obstructed. Regular breathing may be too shallow from partial failure of circulation in the brain. Efficient in depth, it may be irregular from intermittent action of the medullary center as in cerebral tumor or abscess, from obstruction of the airway by falling back of the tongue, or from old pleuritic adhesions of the reflex laryngeal spasm, from surgical stimuli or hampered descent of the diaphragm. We ascribe too rapid respiration most frequently to imperfect narcosis and mental emotion; too slow to extreme overdosage, pressure of cerebral tumor, hemorrhage or abscess. Slow respiration is sometimes normal to some people in health and this must be considered.

The color of the skin I have found a reliable sign of the exact degree of anaesthesia present, natural flushing or rosy hue being evidence of efficient circulation, bluish tinge of lips, ears and fingertips denoting insufficient supply of air to the blood. Pallor indicates a commencing failure of the circulation. Overdosage, wrong posture, exhaustion from shock, produce pallor in deep anaesthesia.

We find the normal radial pulse becoming fuller and stronger with anaesthesia in the beginning. When anaesthesia is established it falls to 64 or 68 or less per minute under chloroform and rises to 86 or 90 under ether. Irregularity is a sign of grave importance. Increased rapidity apart from anoxaemia indicates exhaustion due to surgical shock. Pulse falling below 56 implies impending failure of circulation. Except in such persons in whom slowness of pulse is an individual or family characteristic. Temperature of the forehead is an excellent sign of general vitality during operation. Coldness of skin of forehead evidences exhaustion and shock.

We find that males require larger quantities of anaesthesia than females and are less easy to manage than females. Women, masculine in build or of muscular development, require as large a quantity as males. The person who over-indulges in alcohol or tobacco requires more dosage. Children are highly susceptible to nervous shock. People of placid temperament require less anaesthetic. People of sedentary lives require less dosage than athletes, etc. People of florid color require more and they show cyanosis more readily.

Rapid talkers are nervous in temperament, for them extreme calmness and tact is needed. We have found some patients who have a horror of anything placed over the face; they are usually mouth-breathers and a small mouth prop between the molar teeth will reassure them. Amount of anaesthetic required is usually in proportion to the patient's bulk.

The anaesthetic should be easily portable, manageable and safe. It should not require unwieldy apparatus. It should nicely graduate the depth of narcosis in proportion to the dose without producing secretion of mucus in the air-passages nor any tendency to oxaemia from other causes. It must be absolutely certain in its action on all and every type and should leave little subsequent effect on the patient's health and comfort. Considering all these things and the low rate of mortality when ether is used, one in 15,000, we have adopted it exclusively at the El Reno Sanitarium.

We use the open method administering the ether, which method consists in dropping ether upon an Esk mask covered with stockinette. The patient's face around the mouth is first greased with sterile vaseline. The eyes are covered with absorbent cotton wrung out of warm water. A towel is placed over that on which mask is laid. The sides of mask are wrapped around by ends of the towel. Ether is dropped on stockinette on exposed part of mask from a common 1-4 oz. can of ether in which is a sterile wicket of cotton which acts very nicely as a dropper. By control of the can, the dosage can be hastened or decreased as needed. The patient's ear is exposed that I may watch the circulation which aids me in determining condition of the patient.

Our preparation of a patient for a surgical anaesthetic is mainly directed towards the regulation of the bowels and diet in such a manner that the stomach and

intestines at the time of the operation shall be empty. We consider rest in bed a day or two before the operation, if possible, very helpful in rendering the patient accustomed to his surroundings, routine of nursing and in allowing actual supervision of diet.

We give one or two ounces of castor oil at two o'clock the afternoon preceding the operation, followed by rectal flushing at midnight and again at 6 a. m. This is when we operate at our usual hour, 8 a. m. This treatment we have always found to almost do away with gas pains after operation. Duration and violence of vomiting are greatly minimized by precaution of previous purgation and abstinence from food. We find that vomiting during anaesthesia need never occur after proper preparation of patient, provided the administrator steadily increases strength of anaesthetic vapor from the beginning to its full strength.

We do not think it advisable to carry an anaesthetized patient from a room to the operating room, because blood pressure may suddenly fall if the head be raised above the plane of the body and because vomiting with possible inhalation of vomited matter is very likely to occur. Where possible, we encourage patients to walk from their rooms to the operating room, as we find that it gives them courage and the mind becomes less engrossed with fear of operation. When they have accustomed themselves to the surroundings they have less fear. Two blankets should be used during the operation, one for the upper, one for the lower part of the body, as heat is always lost during anaesthesia. The more a patient perspires the better.

In cases of children, we find that little girls are easier to manage than boys, as they do not have the nervousness. We encourage boys over five by appealing to their manliness. We do not encourage the presence of mothers in the operating room, as a child is much more easily managed by a gentle doctor and a kind nurse than if a relative were standing near on the verge of tears.

With all patients we find it a good plan to keep talking to them, telling them how to breathe, and at the same time conversing in a gentle tone of voice that will quiet the mind until they drop off to sleep. With children we get them to count, add, multiply, etc.

The taste of ether when presented by our method is not objected to by the majority of patients and there is hardly any excitement or struggling except in alcoholic subjects. The time taken to induce the condition of anaesthesia is usually from 10 to 15 minutes.

The advantage of the open method over the closed bag is that the amount of mucus secreted in the mouth and fauces, trachea and bronchi is much less. There is no tendency of coughing, retching, or labored breathing. The depth of respiration is decidedly less in degree and sudden changes in its type are rare. The blood pressure is well maintained. With our method we find no oozing of venous blood from the operation wound, nor congestion of the capillary vessels. The musculature becomes completely relaxed and reflexed laryngeal spasm and disturbances of respiration, caused by surgical stimuli, are less marked than other anaesthesia. Abdominal movement is not heaving in character. Experience has proven that bad after effects, such as headache, vomiting, taste of ether, are greatly reduced. The occurrence of post anaesthesia vomiting is reduced to 32 1-2 per cent.

In cases of adenoids and diseases of the mouth, we place the patient so that the head hangs over the table in order to let the blood run out, unless there is a suction tube to draw the blood from field of operation. After I have put the patient to sleep by open method, I put in my self-retaining mouth-gag—Davis make—and by means of an electric motor I give the ether vapor which is procured by keeping bottle containing ether in jar of hot water, and a steady anaesthetic can be given throughout the operation. This method eliminates the possibility of patient coming out before operation is completed, which would necessitate being reanaesthetized.

In regard to surgical shock which we all encounter in our experience, I would like to say that perhaps the anaesthetist does not often enough receive the blame



for the shock, for in the majority of cases the patient is taken from the operating table to his room where the shock is laid to other things, such as hemorrhage, lack of resistance, etc., but I believe also in many instances where shock is attributed to anaesthesia it is due to prolonged operation, unnecessary handling of viscera, excessive hemorrhages due to the operator, not to the anaesthetist.

Regarding patients suffering from valvular heart lesion, I find that these patients take less anaesthetic and stand up better than one would think.

There has been much discussion and the public has been much excited over the new method of producing painless child-birth, "Twilight Sleep", produced by gas anaesthesia. Unfortunately I can not discuss it, as I have no experience with it, but I mention it hoping to bring it into discussion. In obstetrics we have been using ether exclusively where a prolonged anaesthetic was necessary. I never use chloroform in a case where a general anaesthetic is needed. I witnessed a case of a patient in which prolonged chloroform anaesthetic was given and the patient died of yellow atrophy of liver. I investigated this matter and was surprised to find that chloroform causes this in many cases.

For local anaesthesia, as you all know, we have many drugs that are used with desired effect. I call attention to effects of one local anaesthetic commonly used, more so by dentists than by our profession—cocaine. It is a conceded fact that most dentists attribute nervousness of patients after cocaine local anaesthesia to hysteria. Upon research I have found that this is due to cocaine poisoning, and ether is a very good antidote in these cases. If slowly dropped on a mask, patient shortly recovers from the toxemia.

In our work please notice that we try to eliminate polypharmacy in anaesthesia as we are taught to do in general medicine. Our patients receive no other drug but 1-4 grain of morphine one hour before operation. After operation our patients are put in a bed in a room already prepared and heated to 75 degrees. Nurse is in constant attendance and aids patient when vomiting, keeping air passages clear from mucus.

Owing to the liability of the human being to the supervention of many forms of respiratory embarrassment, that particular skill is required in discerning and removing causes of hampered breathing and insufficient oxygenation of the blood. Services of an experienced anaesthetist are now deemed absolutely necessary to relieve the surgeon of all responsibility with regard to the patient's general condition during the operation.

Because of the gravity of the duties of the anaesthetist, he should be thoroughly equipped, not only with medical qualification but possess also a keen scent, perfect sense of sight and hearing and gentleness of touch. I find that in previous hospital appointments the anaesthetist learns the method of handling the patient and the tact and courtesy so necessary. Careful practice and development of his art alone can give him facility and assurance and inspire the patient with intuitive confidence in his ability.

To us fall the provision and accurate manipulation of the best drugs and apparatus for the administration of the anaesthetic; the detection of the symptoms and physical signs of disease which will effect the anaesthetic; the choice of proper anaesthetic, protection of body from external harm, regulation of atmospheric temperature, resort to stimulants, methods of resuscitating in case of failing vitality; safe transference to bed and supervision during recovery from insensibility. It is the duty then, of every anaesthetist to master the principles upon which anaesthesia may be safely administered, and the use of the best apparatus, so that he may have no doubt about the nature of his duties nor timidity during the performance.

### Discussion.

**Dr. Floyd Bolend, Oklahoma City:** I am sorry I did not get in at the beginning of the paper. I heard most of it. I want to compliment the doctor on the contents of the paper. It seems to have covered every phase of the subject. I

want to say a few words on preparation. It has been our custom to give a quantity of morphine and it has been our experience that it gets rid of a good deal of saliva; and the nurses in the hospital give this information—that the patient who has a preliminary dose of 1-150 of atropin is less trouble subsequent to operation than he who does not; there is less fighting and rolling and the patient is easier to handle, being more quiet throughout the operation; any authority on operation knows it is bad for the patient to roll during operation.

The proposition of the surgeon helping was mentioned. I do not think I would have the nerve to ask one of our surgeons to help produce respiration. They would probably say: "They did not bring me in there to give the anesthetic and if you cannot take care of it the next time a surgeon has an anesthetic given he will get someone else to do it".

The color of the skin also I think is a good indication of the state of anesthesia in which the patient is at that time. Another thing, I have seen some mighty good men in the beginning of the method of giving anesthetic use three or four drops of oil of bitter orange on the mask and let the patient breathe three or four times of it. The administration of ether for a few minutes and the administration of a few more drops seems to relieve the fears of the patient.

I want to compliment the doctor on the time of giving ether anesthesia. Excepting occasional cases, I cannot do it. It usually takes from eleven to fifteen minutes before I get the patient thoroughly under.

In removing tonsils and adenoids, I think if we give plenty of ether that there will be no difficulty or reason to go back with the ether. I have known people who were able to take out the tonsils and adenoids and accomplish the entire operation without putting the ether mask back on the face.

With reference to the gas anesthesia, it is an ideal anesthesia. Unfortunately, I have given a few; not many, not enough to give a report in the discussion here, but gas makes an ideal anesthesia in confinement.

**Dr. Riley**, closing: I appreciate the discussion very much, but I think the Doctor misunderstood the paper in regard to the surgeon performing the operation pressing on the chest. The object in mentioning this is in extreme cases where the patient is very bad.

In my experience I find that all depends upon method of operation and the condition of the tonsils, as in some cases the tonsilotomy could be performed very quickly and once anesthetized, would be sufficient to finish the operation. But in cases where the method adopted by the operator was by dissection or snare and the tonsils diseased and friable it would become necessary to have a continued anesthetic and in some cases necessitating twenty-five or thirty minutes under the anesthetic.

Thus you see it would be inconsistent to allow the patient to be so deeply under. In those cases I switch from the open method to the vapor and continue as long as it becomes necessary for the operator to operate.

### LUNG REST.

G. B. Webb, A. M. Foster and F. M. Houek, Colorado Springs, Colo. (*Journal A. M. A.*, Nov. 11, 1916), call attention to the value of posture in the treatment of tuberculosis. When a tuberculous patient rests on one side at night the dependent lung is restrained in its motion but the upper lung opens and closes about 12,000 times during ten hours of sleep. They have noticed a marked tendency in consumptives to lie on the right side and it thus happens that the very lung that needs the most rest, since the right side is the most often first involved, is getting the most work. They give some statistics of their observations and state that they have found very little in regard to this point, which they consider of some importance in the literature. Link, however, suggested in 1902 a few hours' rest each day on the diseased side and calls attention to the possibility of hyperemia and added rest to the affected lung in this posture.

## THE DIFFERENTIAL DIAGNOSIS AND TREATMENT OF THE DISEASES OF THE THROAT, CHARACTERIZED BY A FORMATION OF PSUEDO-MEMBRANE.\*

MANFRED C. McNEW, M. D., Ada, Okla.

In taking up for study and discussion before our society today the subject of differential diagnosis between diphtheria, membranous croup and Vincent's angina, we think we realize our subject is an extensive one and in view of this fact will not go into details as fully as we could on account that our paper would be too lengthy and wearisome to our hearers. But we will as briefly as possible consider each of the above diseases separately.

First, diphtheria is an acute infectious disease characterized by the presence of the Klebs-Loeffler bacillus. As to the geographical and racial distribution, it may be said to be well nigh universal with one exception, and that in the negro race, in which race it is not found so often, and it is supposed that is on account of their free breathing space, as it is well known that they have very large capacious nasal cavities. Open doors and well ventilated rooms are good preventive measures against its prevalence.

### Types of Diphtheria.

Before considering the symptomatology it will be well to consider the various types of diphtheria. We will describe it according to the seat of local manifestations, as nasal, bronchial, conjunctival, aural, vaginal, and rectal.

Catarrhal diphtheria is characterized by simple redness and swelling of the tonsils and pharynx, with no false membrane. The Klebs-Loeffler bacilli are found. Spontaneous recovery occurs in a few days. The germs from such a case transplanted into a healthy throat might give rise to a very severe type.

Fibrinous Type.—This type is due to the action of the Klebs-Loeffler bacilli uncomplicated by any other germ. It may be purely local in its character, the membrane and the slight redness surrounding it being the only symptoms.

Mixed Type.—This type is characterized by great inflammatory reaction in the neighborhood of the pseudo-membrane, and by the presence of the Klebs-Loeffler bacilli with some other pathogenic organisms, usually the streptococcus and their toxins. Mixed infections are more dangerous and experiments on animals show that antitoxin has little or no effect in checking the ravages of this type of infection.

**Symptomatology.**—The disease is ushered in by a feeling of discomfort, loss of appetite, constipation, slight sore throat, difficulty in swallowing, and more or less hoarseness. The temperature varies according to the type of the disease. Partial angina is the most common form of the disease. Early there is a general redness of the pharynx and pillars of the fauces. The tonsils are much increased in redness, the membrane may form on the posterior pillars, uvula, or the walls of the pharynx. First, one tonsil is involved and then the other. The temperature is elevated one or two degrees, the general health is good.

General or toxic angina is characterized by a thicker and more extensive pseudo-membrane, gray or dirty yellow in color, or even brown or black. The whole tonsil, the pillars, the uvula, and pharynx are covered by the membrane in from three to six days.

Phlegmonous or strepto-diphtheritic angina involves the entire throat from the beginning. The mucous membrane is dark red and the uvula swollen.

In a pulse rate when reaching one hundred and forty the death rate is about 20 per cent, increasing to 90 per cent at a pulse rate of 180. Reduced blood pressure as shown by sphygmographic tracings indicates an increased absorption of diphtheria toxins and warrants a grave prognosis.

Laryngeal diphtheria (true croup), membranous croup, etc. There is no difference in this and true diphtheria except the location of the formation of the membrane. In the etiology there is no difference, but in the for-

\*Read before Pontotoc County Society, April, 1916.



mation of the membrane in this form of croup we will usually find it begins in the nose and the laryngeal trouble is secondary to the formation of membrane in the nose. The membrane in the nose is often so extensive that it can be removed as an entire cast of most of the nasal cavity.

**Treatment.**—The local treatment consists in the use of an antiseptic solution such as boric acid, chloride of zinc solution, etc., at a temperature of 110 degrees, with a fountain syringe. Place the patient on one side and nozzle of syringe in one nostril, the fluid flowing out of the other until it comes away clear; the patients mouth should be held open with a spool or mouth gag to prevent swallowing, as this act might force the solution into the middle ear and cause mastoiditis.

As to general treatment, I know of no better stimulant than alcohol in the form of whiskey or brandy. Strychnine is the second best stimulant. Anti-toxin is the only thing that we can rely on for the cure of diphtheria. The dose is 5,000 units in ordinary diphtheria to a child one year old; 10,000 units in severe laryngeal cases of any age.

Intubation and tracheotomy will have to be resorted to in some cases, but not as often as was the case before anti-toxin. Intubation is attended with a little lower rate of mortality than tracheotomy.

### Vincent's Angina.

Synonyms.—Ulcerative tonsilitis, pseudo-membranous angina.

**Etiology.**—Since Vincent discovered a spirillum associated with a fusiform bacillus found in certain forms of ulcerative tonsilitis, the condition has been called Vincent's angina. The disease is most frequently found in young persons, but sometimes occurs in persons of middle life. Local irritative lesions in the mouth, such as bad teeth, inflamed gums, and oral uncleanness favor the development of this disease.

**Pathology.**—The lesions commonly involve one tonsil, usually at its upper part. It may spread to the soft palate, the pharynx, or the gums. It may even spread to the larynx or trachea. The membrane covering the patches is a pseudo-membrane and is formed by the necrosis of the superficial layers of the mucous membrane, not by exudation. The patches are of a grayish white color surrounded by a red, inflamed areola, but separated from each other by healthy tissues. On the removal of the membrane which is granular and cheesy in consistency, an ulcerated area is exposed. The ulcerated areas bleed freely and are soon covered by a new membrane. The ulceration at times is very destructive, destroying the whole or a part of the tonsil and invades healthy tissue.

A case has been reported where the tonsils were removed from the throat of an eighteen year old girl several weeks following the apparent cure of a case of Vincent's angina. The wound became infected, the membrane extending across the soft palate and uvula. The patient suffered very great pain for three weeks, the uvula sloughed off and there was deep ulceration of the soft palate. The characteristic fusiform bacillus and spirillum of Vincent were present. But we must not forget that the diagnosis is made positive by the discovery of the Vincent bacteria. Unquestionably cases which have been diagnosed diphtheria were Vincent's angina. The diseases usually confounded with it are diphtheria and syphilis. Many cases of what are called ulcerative sore throat and gangrenous tonsilitis are in reality Vincent's angina.

**Treatment.**—Local treatment is of most importance. The galvano cautery and chemical cauterizing agents have been used with much success. The tincture of iodine applied to the ulcerated area several times a day, the application being limited to the ulcer, is probably the best local agent for destroying the bacteria and promoting healing. Mouth washes, such as Seiler's or Dobell's solution, are advantageous. Most relief from the pain in swallowing will be obtained from the use of orthoform in powder or tablet form. General tonic treatment is indicated.

**JOURNAL OF THE OKLAHOMA STATE MEDICAL ASSOCIATION**

VOLUME X

MARCH, 1917

NUMBER 3

PUBLISHED MONTHLY AT MUSKOGEE, OKLA., UNDER DIRECTION OF THE COUNCIL

DR. CLAUDE A. THOMPSON, EDITOR-IN-CHIEF

ENTERED AT THE POSTOFFICE AT MUSKOGEE, OKLAHOMA AS SECOND CLASS MAIL MATTER, JULY 28, 1912

THIS IS THE OFFICIAL JOURNAL OF THE OKLAHOMA STATE MEDICAL ASSOCIATION. ALL COMMUNICATIONS SHOULD BE ADDRESSED TO THE JOURNAL OF THE OKLAHOMA STATE MEDICAL ASSOCIATION, BARNES BUILDING, MUSKOGEE, OKLAHOMA.

The editorial department is not responsible for the opinions expressed in the original articles of contributors.

Reprints of original articles will be supplied at actual cost, provided request for them is attached to manuscript or made in sufficient time before publication.

Articles sent this Journal for publication and all those read at the annual meetings of the State Association are the sole property of this Journal. The Journal relies on each individual contributor's strict adherence to this well-known rule of medical journalism. In the event an article sent this Journal for publication is published before appearance in the Journal, the manuscript will be returned to the writer.

Failure to receive the Journal should call for immediate notification of the editor, 507 Barnes Building, Muskogee, Okla.

Local news of possible interest to the medical profession, notes on removals, changes in address, deaths and weddings will be gratefully received.

Advertising of articles, drugs or compounds not approved by the Council on Pharmacy of the A. M. A. will not be accepted.

Advertising rates will be supplied on application. It is suggested that wherever possible members of the State Association should patronize our advertisers in preference to others as a matter of fair reciprocity.

**EDITORIAL****PAREGORIC COMES UNDER TERMS OF THE HARRISON ACT.**

Physicians generally have understood that paregoric was exempt from the terms of operation of the Harrison Act, but recently it has been forcibly called to the attention of druggists by Federal Inspectors who, it is said, collected sums in compromise of charges against the druggists for illegal sales of the tincture. This is of especial interest to those physicians who operate small stocks of drugs in conjunction with their work. The violation of law is based on the following clause, which it will be seen is applicable as the inspectors construe the matter.

After naming various percentages exempt from operation of the law, the following language occurs:

"Provided, That such remedies and preparations are sold, distributed, given away, dispensed, or possessed as medicines and not for the purpose of evading the intentions and provisions of this act."

It was discovered on inspection of all the large pharmaceutical and drug houses handling these products, that recently the sale of camphorated tincture had enormously increased. On going further it was discovered that druggists were selling directly to consumers large quantities, pints, quarts and more, of the drug, and to people living in towns where drug stores were convenient to them.

This construction, will of course, promptly put an end to such business, which is undoubtedly evasive of the law.

**THE OSTEOPATH FURNISHES AMUSEMENT.**

An amusing episode of the joint meeting of the Council, Officers, Legislative Committee and State Board of Examiners held in Oklahoma City January 9th. attended as it was by the Legislative Committee of the Osteopathic Fraternity, was the insistence of the Osteopath that his law given "right to use drugs in emergency" be not interfered with. It should be noted in passing that no act of the legislature

could interfere with any right now held by Osteopaths, but they interpreted certain proposed changes as having that possible effect and their valiant plea that they be not interfered with in this right, which by the way, is accorded every person, whether he be physician, osteopath, barber or plow-boy, was somewhat amusing to physicians who have for a long time noted their crude attempts to invade the field of general medicine under the guise of "emergency."

As a matter of fact and pointed out in this Journal heretofore, the Osteopath is practicing all the medicine he gets any sort of an opportunity to practice. He rushed frantically to the Federal authorities to register in order that he could have a convenient hypodermic ready to assuage pain, if his hand made and hand applied science failed him or if his manipulative strength was exhausted.

It is said that at the Blackwell meeting of this order a great deal of the program was taken up with discussing the merits of vaccines and other biological products; that at another meeting a near riot occurred on the grave proposition of "Antotixin, to be or not to be," etc.

All this goes to show that the osteopath is in the evolutionary stage of his life. Finding that he cannot handle all ills by manipulation, the apparent silliness of the procedure appealing to his better sense, he is slowly groping along trying to adopt and put in operation what he considers the better parts of *materia medica*. With all that, however, it should not be lost sight of that he is evading the intent of the law, when he does more than use drugs "in emergency." The law clearly never intended that he should administer drugs—going so far as to explicitly say he might administer anesthetics in obstetrics and surgery—and in other sections laying down a more particular examination for practitioners who were supposed to use drugs.

We do not wonder a moment just what his attitude would be in the face, say, of diphtheria; he would promptly go yelping to the druggist for antitoxin. Certainly in the presence of smallpox he would desert the teaching of the great A. T. Still, who advised a little Spanish fly ointment to be applied on the deltoid in lieu of vaccine. He may yet be found smuggling into his patients' muscles, by hand of course, a little salvarsan or mercury if the case is syphilitic.

We suggest that our great universities offer a course in a reasonable amount of *materia medica*, so that he may add to his shingle after "Osteopath" and user of drugs "in emergency."

### CRUDE DEATH REPORTS.

A death report should state the "cause" of death, otherwise the report, beyond proclaiming that the man is dead, will have neither scientific nor statistical value. The Bureau of the Census has just issued a late pocket reference on the causes of death. Emphasis is laid on undesirable terms. Among some noted are:

"Abscess," what was the infection, tuberculous, traumatic, etc., location? "Accident," "Injury," "Gunshot," etc., was it accidental, homicidal, suicidal? State the means of injury. "Dropsy," what caused it? "Debility," "Exhaustion," what disease caused the condition? and so on.

Cancer, Cardiac Insufficiency, Congestion, Convulsions, Croup, Edema of Lung, Fracture, Gastric Catarrh, Acute Indigestion, Heart Disease and Failure, Hemorrhage, Meningitis, Surgical Operation, Shock, Amputation, Laparotomy, Paralysis, Peritonitis, Pneumonia, Ptomain Poisoning, Septicemia, Sepsis, Septic Infection, Specific, Tabes, Toxemia, Tuberculosis, Tumor, Uremia, Uterine Hemorrhage, mean nothing of value scientifically or statistically. Many of the above terms should be absolutely dropped and when used should be clearly qualified as to cause, location and type. To make our returns valuable should be the aim of every physician. If the work is to be done it should be done in such a way as to be of distinct aid to future people. The hurried looseness of style and disregard for accuracy should be abandoned.



### CONSISTENCY.

House Bill No. 232, by Representative Fitzgerald of Kiowa County, has the following general ideas: "An act to amend sections 4 and 6, of Chapter 31, of the Session Laws of Oklahoma, 1916, entitled: 'An act concerning the spread and control of hog cholera, or swine plague, defining the duties of persons and corporations in relation thereto, and concerning the production, sale and use of hog cholera serum and cholera virus, providing a penalty and repealing all acts and parts of acts in conflict therewith'".

While we have not seen a copy of the proposed amendment, there is every reason to assume that it has for its ultimate goal the prevention of disease among our "razor backs", Berkshires, Polands, etc. We have reason to believe the legislature will be charitable toward the suggestion that if the administering of serums and vaccines, based as they are, on the identical indications in the human, are proper for our hog citizens, they probably are proper, and the best to use, in those cases where indicated by illness in the human citizen. Going a step further, we are constrained to inquire what reception a "New Messiah" would have at the hands of our agriculturists, veterinarians and animal "immunists"—a barber, drayman or dishwasher, for instance—who presented the novel proposition that he could handle dangerous infections among our high-priced swine by "adjusting" displacements in their spinal columns? What would our farmers say to him who asserted that quarantine against "Foot and Mouth Disease" was unnecessary? What would our citizens say to him who asserted that examination by tuberculin test to see if the cow family had tuberculosis before the milk was sold to our babies was unnecessary as a matter of protection?

We now call the attention of our legislators to the obvious fact that if the claims of those "scientists" called CHIROPRACTORS are based on common sense—if their claim that measles, diphtheria, smallpox, meningitis, typhoid and all other contagious diseases need neither isolation, quarantine or "serums" and "vaccines," where years of experience at the hands of physicians who have attended four years or more of college and study of the problems says that such are needed, then we certainly have no need to look further than that body of newly fledged "scientists" to handle our cattle and swine as they propose to handle analogous conditions in the human body.

Now in all levity, why waste the taxpayers' money on the production of "poisonous" serums (a chiropractic favoritism)—to poison the bodies of our hogs with, if identical preparations poison the bodies of our human family? If all diseases—cholera morbus from too much green peaches, gonorrhoea from ill considered contact, seven year itch from similar contact, typhoid from drinking infected milk or water—are to be properly handled by "adjusting" the spine, which is "impinging" a nerve and thereby causing the disease, why not, Oh, Consistency, adjust the tuberculous cow, the distempered horse, the rabitic mad dog, the choleraic hog, the ropy hen and the roty sheep?

The Oklahoma Medical Profession believes the administering of serums and vaccines to prevent and cure disease in animals is proper, based on sound, irrefutable evidence and experience, and will save the lives of our animals and the money of our citizens. Mr. Frank Gault says that "dipped" cattle, vaccinated hogs and tested animals bring a better price on the market. Those who know, know that a "dipped" cow will weigh more than a tick-infested one, the former stays fat and healthy, the latter will not get fat at all until that little formality of disease destruction is carried out. In all seriousness, we remind you that these operations are carried out basically on the same theory that infection is destroyed in the human.

To be consistent, we should promptly accept one horn or the other of this proposition. We are all animals together, we eat food, breathe oxygenated air and perform nearly all functions in somewhat similar manner. We vaccinate hogs, treat distemper with vaccines, test for tuberculosis in similar manner in our lower ani-

mals. Why permit an uneducated, unbalanced, illy trained class of self-assertives to go ragging over the land proclaiming they do not use common sense methods as are used on other animals, and whenever indicated are used by physicians in the treatment and prevention of disease in the human, but that they "adjust" away the trouble?

Mr. Legislator, what would you say if you were called home to the bedside of your child who was choking to death with diphtheria and found such mummery and foolishness as "adjusting" the trouble going on? There are people in Oklahoma who know not how to differentiate between a trained physician and the twelve-months-ago barber who has recently acquired the right (?) to chiropract on the helpless infant of the deluded parent. It is up to you, Mr. Legislator, in your wisdom, to protect those who cannot protect themselves from imposition.

## CURRENT MEDICAL LITERATURE

Conducted by

DRS. CURT von WEDEL, Jr., and L. J. MOORMAN, Oklahoma City  
and FRED J. WILKEMEYER, Muskogee

### SURGICAL CAUTIONS.

So-called small operative procedures need much consideration. Dilation, and frequently, curettage of the uterine cavity with instillation of iodine is often done preceding abdominal operations. On two or three occasions during the past few years I have had occasion to see perforation into the abdominal cavity through the uterine wall. This was not due to carelessness nor was the uterus exceptionally friable, but followed the use of a long, straight and slender pointed dilator into a retroflexed uterus. There were no bad symptoms referable to this mishap but should one not recognize the mistake (and it is not always an easy matter until damage is done) pieces of intestine or omentum may be grown down and very serious consequences result.

One should always locate the course of the canal with a short, easily manipulated instrument—preferably a six-inch curved hemostat followed up with a ten-inch, if there is marked displacement, until the cavity assumes an angle safe for the introduction of the uterine dilator.

Ventral fixation of the uterus is many times a failure, due primarily to the poor application of tissues. The intention is good but in bringing up the uterus to the fascia the peritoneum folds between and in a few months the organ swings itself low in the pelvis. See that the free fascia comes in contact with the fundus uteri and that it is not too close to the symphysis pubis so as to interfere with the vesicle function and the results will be permanent.

In preparing the hands for surgical manipulations soap and water energetically used with a soft brush is most important. In addition to this, the ends of the phalanges (including the nails) may be dipped into 5 per cent iodine solution, thence into 98 per cent alcohol (both hands and forearms). The iodine does not penetrate deeply following the water but does take care of areas about the nails that may be missed by the brush.

Fred Y. Cronk.

### ANNALS OF SURGERY: DECEMBER, 1916.

Dr. George M. Dorrance, Philadelphia, Pa.

It is a curious fact that in every walk of life the majority of us strive to do the big things with the result that some of the simpler, obvious, everyday things are treated lightly or totally ignored. Surgery is no exception to the rule. The youngest member of the profession seeks to invent some new methods of devising or improving major operations, thus neglecting the common ills with which he daily comes in contact. In every surgical dispensary and in the offices of many practitioners scarcely a week goes by that a patient suffering from a felon does not apply for treatment. In vast majority of cases, he is told that the condition is not serious; some poultice or local application is made at the first visit and later, when suppuration occurs, it is lanced. This form of treatment often results in the loss of a part or all of the distal phalanx.

**Treatment:** An incision starting at the base of the nail on one side is extended in the line of the furrow over the tip of the finger, down on the other side to a point on a level with the beginning of the incision, in that way, making a flap of the tip of finger.

The appearance after the flap is made and for the first forty-eight hours is often the source of worryment to the patient and the operator. This is the critical stage in the treatment and on no account should the drainage be removed and the flaps returned to their original position. The final result will not be a deformity and bear this in mind. We grant that for a week or ten days afterwards you might regret your radical procedure, but experience has shown that if the method given above is carefully adhered to, the final scar will be scarcely noticeable.

The wound is dressed with normal saline solution. The dressings are removed daily, but the drainage is undisturbed until the third day, when it is permanently removed.

Keeping the parts moist by soaking the finger (dressing left intact) every third hour in normal saline solution is a source of comfort to the patient and aids drainage.

L. F. Watson.

#### ANNALS OF SURGERY: SEPTEMBER, 1916.

Dr. A. C. Burnham, New York

While Colles's fracture has been extensively studied and is given due consideration in all modern text-books, fractures about the wrist in childhood and early life are less perfectly understood and do not receive the attention to which, in view of their frequency and importance, they are intitled. Notwithstanding the fact that Colles's fracture has been variously described by different writers and that it was probably imperfectly understood by Colles himself, it is a definite clinical entity, and it is a mistake to include under the term all fractures of the lower third of the radius either with or without the involvement of the ulna.

From a study of many cases of fracture about the wrist in childhood and adolescence, among which the above cited cases may serve as typical examples, it appears that the following conclusions are justified:

1. Typical Colles's fracture is very uncommon before adult life.
2. In childhood (that is before the tenth or twelfth year), the common type of fracture about the wrist is fracture of both radius and ulna either greenstick or complete.
3. Separation of the lower radial epiphysis is of frequent occurrence during the early part of the second decade and should be carefully differentiated from dislocation of the wrist, which is so rare as to be a surgical curiosity.
4. When fracture of the radius is suspected, either in childhood or adolescence, the line of fracture should be searched for at a point considerably higher than is the case when the same injury occurs later in life.
5. In the case of fracture of the lower end of the radius in early life the frequency of the associated fracture of the ulna must be constantly borne in mind, the treatment of the condition being modified accordingly.

L. F. Watson.

#### INTERNATIONAL ABSTRACT OF SURGERY.

H. C. Sloan

**The Goiter Problem:** The treatment of Graves' disease as given in detail by the author may be briefly outlined as follows: Careful search by every known means for a possible focus of infection in any region of the body. If such a focus be found, remove it; if not, eliminate the products of bacterial decomposition in the intestinal tract as far as possible. Thymol (five grains) one pint of buttermilk daily, little or no meat, and vegetables generously is the routine. The syrup of the iodine of iron, one to two minims, or painting the skin the size of a quarter with tincture of iodine if iodine is used, with due regard to a possible increase of all bad symptoms during the medication. If, after one month there is no improvement, surgical interference is indicated.

For successful surgery in Graves' disease, it is necessary to know the ability of the body to neutralize acid waste products of metabolism. The respiratory center responds very quickly to increased acidity in the blood stream; inability of a patient to hold his breath more than forty seconds is taken as the limit of safety regarding his ability to neutralize acids. A pulse rate of 120 while in bed, a degree of fever during the day, and signs of lowered alkaline reserve are contra-indications for immediate lobectomy. Two to ten weeks are allowed to pass under treatment by the following milder methods: injection into the gland of 5 to 10 drops of 50 per cent quinine and urea solution (Watson), the injection of 25 to 50 cc. boiling water (Porter), and ligation of the superior thyroid arteries and their sympathetic nerves.

In severe cases operation is done without the knowledge of the patient that it is to take place. It is performed under full anaesthesia with as little trauma as possible, after thoroughly blocking the tissues to be handled. Four-fifths of the gland is removed; in no case has mucoedema followed the operation.

L. F. Watson.

#### INTERNATIONAL ABSTRACT OF SURGERY, JANUARY, 1917.

E. S. Judd and J. D. Pemberton

**Results of Operations for Exophthalmic Goiter:** The authors present a statistical study of cases operated upon at the Mayo clinic in 1909. Of the 176 patients operated upon in 1909, 21 died, 7 in the hospital. These patients were all operated upon at the maximum of the severity of the disease, because at that time the danger of operation at the height of a paroxysm was not so fully realized as it is at present. Fourteen patients have died since leaving the hospital. They lived an average of 14.1 months.

Of the 176 patients, 121 were traced. These 121 patients are divided into five groups: Group 1. Fifty-five patients, or 45 per cent cured. Group 2. Twenty-two patients, or 18.1 per cent, practically cured of their symptoms but still had traces of the disease. Group 3. Seven cases markedly improved but most of the time there was evidence of the old trouble—exophthalmos or nervousness. Group 4.



Five patients with only slight improvement. Group 5. Eight patients with little or no benefit. In Groups 3, 4 and 5, are several cases which had only one or two ligations and which might possibly be cured by a resection.

The average length of time required to effect a cure was 17.9 months. The average length of time the "cured" patients had symptoms before coming to operation was 19.3 months. In the group receiving no benefit, the average time of symptoms was 22.2 months. In spite of the closeness of these figures, the authors believe that a greater percentage of cures would have been effected if the cases had been operated upon earlier. The eye symptoms (all the cases in this series had distinct exophthalmos) were the first to improve following operation. Some patients with the subjective feeling of tension, stated that the eyes felt much better before any reduction in the exophthalmos was noticeable.

L. F. Watson.

### THE SENSORY EVIDENCE OF NERVE REGENERATION.

By Isadore Coriat, M. D.

(Abstracted from the *Boston Medical Journal*, February, 1917)

"As a result of his clinical studies, the author of this original paper arrives at the following conclusions:

The nerve supply of the skin is not only different for the various receptors for pain and touch, but each of these regenerates at varying periods after a primary or secondary nerve suture. The time necessary for the beginning of the regenerative process varies, although definite evidence of regeneration should be found within less than a month after suture of a nerve.

The best evidence of regeneration, both from the standpoint of time and of successful nerve suture, is seen in the *protopathic system*. Here when the tests are carefully made, pain points of various intensity and number can be demonstrated in an area otherwise completely analgesic. That these points are evidence of a regenerative process in the nerve was demonstrated, not only clinically, but was also corroborated in one case where it was fortunate enough to secure an histological examination after a nerve suture. The decrease in the threshold-sensibility of these pain points seems to run parallel with the time and success of the nerve suture. By this is meant that during the period of early regeneration, the pain points are very hypersensitive, probably a type of protective mechanism in order to guard the end-organs of the skin from external injury during their most delicate period. As the process of regeneration proceeds, these pain points become less and less sensitive, finally disappearing entirely when regeneration is complete. It seems also from our clinical and neurological studies that the true source of regenerative process in the nerve trunks is to be found in the neurilemma cells of the nerve trunk itself. It is in the presence of the neurilemma cells, or rather on their very active proliferation, that the possibility of regeneration and recovery after injury or suture is based. Such a theory of the mechanism of nerve regeneration has an important bearing upon the conception of the histogenetic structure of the nervous system and also upon the more practical aspects of the evidence of regeneration after primary or secondary nerve suture.

Fred J. Wilkemyer.

### FURUNCULOSIS TREATMENT.

John Bowen, M. D.

(Abstract from *Boston Medical Journal*, Jan. 18, 1917, page 96)

Take a hot bath morning and night, scrubbing the whole body, including the head, while in the bath, with soap and water, using a wash-cloth or a piece of flannel. After this thorough washing with soap, again bathe, this time with a saturated solution of boracic acid in water, with the addition of a small proportion of camphor water. The skin is not allowed to be wiped. Then the individual furuncles are treated by dressing them with following ointment spread on cotton or linen and bound lightly on, viz: boracic acid 4; precipitated sulphur 4; carbolated petrolatum 32.

Every stitch of linen worn next to the skin should be changed daily and in extensive furunculosis all the bed clothing that touches the individual, as well as the night-clothing, should be subjected to a daily change. This treatment must be continued several weeks after the last evidence of pyogenic infection has appeared.

Fred J. Wilkemyer.

### CONTINUAL STOMACH LAVAGE AND CONTINUOUS HYPODERMOCLYSIS IN PERITONITIS, PERSISTENT VOMITING WITH DEHYDRATION, AND DILATED STOMACH.

Allen B. Kanavel, Chicago, in *Surgery, Gynecology and Obstetrics*, October, 1916, states that the separate or combined use of continual stomach lavage and continuous hypodermoclysis in the dehydration and toxæmia incident to peritonitis has proved itself of such signal benefit that it would seem to be worthy of wider appreciation. It has also been used with great satisfaction in persistent vomiting of any type, in dilated stomach after operation, and in similar states, while the continuous hypodermoclysis in addition to being used in combination with the gastric lavage may be used in dehydration and toxæmia from any cause.

In cases where the heart is growing weak there has been at times a tendency to water-logging of the tissue. Therefore such cases are watched carefully so that, on the one hand this will not occur and on the other, we shall not overload the circulation and strain the heart.

The benefit patients suffering from peritonitis have derived from the combined use of continual gastric lavage and continuous hypodermoclysis is far beyond that secured by any other procedure with which we have had experience.

L. F. Watson.

### THE USE OF ELECTRIC LIGHT AND HYPOCHLOROUS ACID IN THE TREATMENT OF WOUNDS.

George W. Crile, Cleveland, in *Surgery, Gynecology and Obstetrics*, October, 1916, states that for some years the electric light has been utilized in the treatment of burns, and in the literature we find occasional mention of the efficiency of electric light treatment for obstinate ulcerating surfaces, such as varicose ulcers, etc. Apparently, however, the wide applicability of this treatment has not been recognized, if one may judge by the paucity of the literature under this heading. Chaput, writing in 1914, states, "in the ordinary electric lamp we possess a simple, practical, economical, and very efficient means for treating obstinate ulcers, and infected and gangrenous sores."

What the experiences of war had proved to military surgeons soon became obvious to us, i. e., that little if any advance in the treatment of infections had been made in many years. We soon realized also that the real reason for the efficiency of the electric light treatment lay in the fact that Nature's own method of promoting repair is thus produced artificially, as is demonstrated not only by Chaput's successful substitution of electric light for sun baths, but far more strikingly by the remarkable facility with which wounds heal in desert places.

Wounds heal best when infection is hindered or destroyed by the agent least harmful to the tissue and without the irritation of foreign bodies in the form of dressings. All these ends are served by the use of hypochlorous acid solution and by exposing the undressed wound to constant light and warmth.

L. F. Watson.

### ACUTE OSTEOMYELITIS OF THE SPINE.

By Daniel Eisendrath.

*Annals of Surgery*, February, 1917.

Eisendrath's opening remark, "The relatively small number of reported cases of osteomyelitis of the spine is probably because a diagnosis is not made," should be well borne in mind. The symptoms of pain in the back, rigidity, oedema and swelling, should in themselves demand an X-ray examination. He states that the death rate is relatively high, due to the fact that sepsis is usually the predominating feature—diagnosis being made only in the post-mortem. He believes it is best not to make a simple incision, but to do a laminectomy whenever the condition of the patient warrants.

He cites an interesting case, involving the third and fourth lumbar vertebrae with walled off pus around the cauda equina. This case promptly cleared after the removal of the spines and laminae of the third and fourth lumbar vertebrae, three large drains being inserted.

Von Wedel.

### THE INFLUENCE OF ACIDOSIS ON SURGICAL PROCEDURES.

By S. A. Lincoln, Calgary, Alberta, Canada.

*Annals of Surgery*, February, 1917.

In a very comprehensive article on acidosis, Lincoln correctly speaks of the necessity of careful pre- and post-operative care. He shows that there are two main factors to be considered in acidosis—first the production of acids, and second their destruction or elimination. Acid production is caused by lack of sleep, emotion, injury, fever, auto-intoxication, etc. The elimination of acids occurs in the gaseous forms, as CO<sub>2</sub> and elimination by kidneys and bowels. He believes that many cases may be averted by preventing that starvation before surgical procedure which was the classical treatment a few years ago.

His treatment is simple and effectual. Two or three days before the operation, sodium bicarbonate should be given until the urine is slightly alkaline. The patient should be fed up to the morning before the operation. Glucose in 5 per cent solution should be given by rectum, and too active catharsis should be avoided. Following the operation, we should commence to feed the patient carbohydrates as early as they can be tolerated. Give enemas by drip, containing 2 drams of sodium bicarbonate to a quart of 5 per cent solution.

He cites two interesting cases. One was a child with a simple herniotomy, whose parents, over zealous of its welfare starved it several days prior to and following the operation. The child, after going into a typical acidosis coma, died. The second case, he was able to diagnose, and the intra-venous injection of a solution containing 2 drams of sodium bicarbonate to a quart of 5 per cent glucose, promptly cleared up the coma, and as Lincoln justly states, thus a tragedy was averted which is often overlooked.

Von Wedel.

### EPILEPSY.

A recent series of communications in current medical journals is concerned with the bacteriology of epilepsy, a subject first brought to attention by Bra in 1902, revived by Reed in 1914 and enlarged upon by the latter author in 1915 and 1916.

Reed has built his conceptions of the etiology of epilepsy upon the fact that constipation and epilepsy are associated in a large number of cases; and upon the theory that the constipation is the result of greater or less atony of the intestinal walls, especially those of the large intestine, or upon interference with the movement of the intestine because of abnormalities of position, or both. Evidently his whole point of view has been largely influenced by the opinions of Arbuthnot Lane. Once stasis has been produced, Reed believes that the body (the blood stream) is invaded by bacteria from the

intestinal tract and these bacteria produce, by means of toxins, or by their presence in the central nervous system, the series of symptoms which we call idiopathic epilepsy. In proof of this theory of infection, he and his assistant, Dr. Hyatt, report the very consistent finding of a peculiar organism in blood cultures which they say is identical with that originally cultivated by Bra, and which, from descriptions, is not clearly different from bacillus subtilis. With pure cultures of this organism they are able to produce convulsive conditions in rabbits by introducing it into the ear veins.

Since Reed's reports, Wherry and Oliver, Caro and Thom, and Terhune have reported investigations aimed to discover more of the facts regarding the events associated with epilepsy.

The report of Wherry and Oliver is, as they acknowledge, a limited one. Nevertheless, working with Dr. Hyatt, they were unable, using the most modern methods, to discover any evidence of blood infection in four of Reed's cases. In a fifth case, one culture tube, in a series of ten, showed a growth which Reed reported contained *B. epilepticus*.

Caro and Thom reported their work with seventy cases from which 160 cultures were made with completely negative results except in four instances in which contamination appeared. The contaminating organism did not correspond with *B. epilepticus*. Moreover, Caro and Thom report that in 17 necropsies on epileptics, Canavan was unable to find any organism resembling *B. epilepticus*.

Terhune, on the other hand, reported that in his series of blood cultures from 24 cases of epilepsy, he was able to isolate a bacillus, identical with Reed's, in 75 per cent of his cases. With this organism he was not able to cause convulsions in rabbits, but was able to do so in cats.

Reed, in a recent polemic, comments on the work of those who have not been able to confirm his results, especially in the case of Wherry and Oliver, and says that "the assumption or inference that the organism does not exist is hardly tenable." No writer with whose work the reviewer is acquainted has said that the organism does not exist, they say they could not find it, when they didn't find it. Reed mentions confirmations of his work by various men at various points, but in no case are the details of their work known. As a matter of fact, the work that has been published on this subject from well organized laboratories in charge of well known workers concerning whose methods there can be no suspicion, is consistently negative.

This does not mean that the facts of Reed, Hyatt and Terhune are not true, but the fact that discrepancies are present makes it obvious more systematic work should be done, preferably in large institutions supplied with every facility, and by thoroughly trained workers.

It is to be hoped that if the finally accumulated evidence is positive, the laboratory workers will not complain that the facts have been "beclouded by a policy of emulative affirmation."

—Paul G. Wooley, *Journal Laboratory and Clinical Medicine*, Jan., 1917.

## PERSONAL AND GENERAL NEWS

**Dr. C. B. Ballard** has moved from Mannsville to Kingston.

**Dr. C. G. Martin**, Pocasset, it is announced, will move to Bristow.

**Dr. Lee Dorrah**, Hammon, visited "The Old Kentucky Home" in January.

**Dr. E. M. Thompson**, Cleveland, has returned from a visit to Toronto, Canada.

**Dr. H. E. Rappolee**, Caddo, sustained a fracture of the arm when his team ran away.

**Dr. E. J. Gray**, Tecumseh, has been appointed county physician of Pottawatomie County.

**Dr. and Mrs. Carl Puckett**, Pryor, announce the birth of Mary Jean Puckett, January 31st.

**Dr. Winnie M. Sanger**, Oklahoma City, is being mentioned as a candidate for the school board.

**Dr. E. B. Dunlap**, Lawton, has been appointed a member of the Insanity Board of Comanche County.

**Dr. J. H. Hansen**, Grandfield, is spending the winter in Galveston and attending the clinics in that city.

**Dr. Chas. R. Phelps**, Oklahoma City, is in the Postgraduate, New York, for special work. He will return April 1st.

**Dr. and Mrs. R. M. Anderson**, Shawnee, visited the New Orleans Mardi Gras, Dr. Anderson doing some work in Tulane on the trip.

**Dr. C. W. Amerson**, Milo, who has been sick some time at his home, went to San Antonio in February where he will remain until he recovers.

**Dr. S. Z. Hawley**, City Superintendent of Health, Tulsa, is in Chicago looking after details in connection with the erection of a new incinerating plant for his City.

**Dr. M. Karasek**, Drumright, narrowly escaped serious injury when his machine turned turtle. He was thrown clear of the car and sustained only a few minor bruises and cuts.

**Dr. Wm. S. Clark**, Oklahoma City, was convicted in the United States District Court, Guthrie, Feb. 8, for violation of the antinarcotic law. He was given a sixty day jail sentence.

**Leo Menton**, Secretary of Oklahoma City's Health Department, is getting tired of incorrect death reports. "Heart Failure" is not a cause of death, though half the doctors use that term for reporting sudden deaths.



**Okfuskee County physicians**, believing that some of the reputed national prosperity should shed its rays on them, are insisting that 1916 patients settle up and have jointly agreed that some arrangement to that end must be made.

**Dr. LeRoy Long**, Oklahoma City, Dean of the Medical Department, represented his Department and the State Medical Association at the Mid-winter conference of the Council on Medical Education and Health and Public Instruction, Chicago, February.

**Dr. M. M. Turlington**, Seminole, was recently found to be in a predicament. Charged with responsibility of representing his county in the legislature, he never responded. On investigation Dr. Turlington reported "too busy", that the sick of his county had first call and were furnishing real entertainment for him with their problems.

**Dr. D. D. Weiser** of Apache, who had been sick for several weeks and went to Rochester in the hope of benefiting, died in that city recently. Dr. Weiser was forty-nine years old, born in Pennsylvania and removed to Oklahoma many years ago. He was a member of several fraternal orders and leaves a wife and one son and a large circle of friends to mourn his loss.

**Homeopathy** and its wonders are hinted at in an advertising envelope issued by a Muskogee physician, the reverse bearing the statement: "You are careful in selecting your banker, who merely takes care of your money. Be more careful in selecting your physician, for he takes care of your life. Those who have not tried Homeopathy have not half tried to get well."

**Louisiana State Board of Medical Examiners** at their December meeting promulgated the rule for a two year's college course for preliminary education to apply to all candidates for licensure beginning the study of medicine after January 1, 1918. Yet we have our festive chiropractor robbing the barber-shop, plow handles and delivery wagons for candidates to carry on their "profession."

A **National Leprosarium** is provided for in the bill passed by the United States Senate January 25. \$250,000 is appropriated, due to the activity of Senator Jos. E. Ransdell, of Louisiana, the establishment to be in charge of the Public Health Service. Surely the eminent Senator does not realize what a waste he is creating. Why not refer the victims to our Chiropractic "Knights of the Hand" scientists? Did the Senator ever know that quarantine is unnecessary, that contagion is a farce?

**Armour and Company** in a special communication call the attention of our readers to some phases of animal therapy. Among the suggestions noted are: True Corpus Luteum should be used in carefully selected cases calling for the product. In no other cases should it be administered. Certain phenomena follow administration. There is great necessity for constant supervision of the patient as to blood pressure, which should not be allowed to fall more than 15 m.m. below normal and never below 90 m.m. The product may be depended upon to produce results.

**Victor Electric Corporation**, a strong merging of the principal manufacturers of electrical apparatus for use in therapeutics and diagnosis, has entered Oklahoma for the purpose of securing the support and cooperation of our medical profession. Their advertisement appears in this issue. This company bears the stamp of truth and sincerity in its dealings with the profession. Their statements are to be relied on and they welcome attention to any deviations as to advertising propriety. Physicians who may be interested in the special equipment they offer should investigate the propositions they have in this greatly spreading field of medical necessity.

## COUNTY SOCIETIES

Announcements of elections and other transactions of county societies have been reported as follows:

**Carter.** Secretary-treasurer, K. R. Rone, Elk City; censor, J. D. Warford, Erick.

**Beckham.** President, J. E. Yarbrough, Erick; Vice-pres., J. M. Denby; Sec., K. R. Rone, Elk City.

**Creek County** elected: President, C. D. Blachly, Drumright; Vice-pres., H. B. Justice; Secretary-treas., H. S. Garland, Sapulpa.

**Jefferson.** President, G. C. Wilton, Ryan; Vice-pres., T. E. Ashinhurst; Secretary-treas., J. I. Derr; delegate, J. I. Derr, Waurika.

**Cleveland.** President, J. M. Williams; Vice-pres., J. J. Gable; Secretary-treas., Gayfree Ellison; delegate, C. S. Bobo, all of Norman.

**Carter.** President, J. C. Best; Vice-pres., A. M. Bacon; Secretary-treas., Robt. H. Henry; censor, C. H. Day; delegates, A. M. Bacon and R. S. Willard, Ardmore.

**Payne.** Meeting at Cushing Jan. 26. Program: Papers were presented by Drs. C. J. Fishman, L. F. Watson and D. D. McHenry, Oklahoma City, and Dr. Stewart of Cushing.

**McClain.** President, J. W. West; Vice-pres., T. C. McCurdy, Purcell; Secretary-treas., O. O. Dawson, Wayne; censor C. B. Smith, Washington; delegate, W. C. McCurdy, Purcell.

**Blaine.** President, M. W. Buchanan, Watonga; Vice-pres., D. F. Stough, Geary; Secretary-treas., J. T. Norris, Okene; delegate, H. W. Doty, Homestead; censors, J. B. Leisure, Watonga; L. H. Murdoch, Okene; D. F. Stough, Geary.

**McIntosh County Society** met in Checotah Feb. 6th with the following announced program: "Cardiac Lesions," A. B. Montgomery; "Causes of Heart Disease," D. E. Little, Eufaula; "Treatment of Cardiac Disease," J. C. Watkins, Checotah.

**Stephens.** President, E. B. Thomason, Velma; Vice-pres., D. M. Montgomery, Marlow; Secretary-treas., J. M. Nieweg, Duncan; delegate, R. L. Montgomery, Marlow; alternate, H. C. Frie, Duncan; censor, S. H. Williamson, Duncan. It is proposed in this society to make each meeting one of especial interest by holding clinics.

**Okmulgee County** met in Okmulgee Feb. 12. Program: "Femur Fractures," V. Berry. "Needed Medical Legislation," W. C. Mitchener; "The Doctor, The Dentist and Pyorrhoea," R. S. Westover, Okmulgee; "Adynamic Ileus, Report of two cases," Ira W. Robertson; "Pneumonia," W. L. Stephenson; "Blood Pressure," I. W. Bollinger, Henryetta. A general discussion of the progress of medicine since the Lincoln birthdays of the sixties was held.

## SPECIAL SOCIETIES

**Central Oklahoma Medical Society**, meeting in Enid, elected Dr. L. Haynes Buxton president; W. H. Bailey secretary-treas., both of Oklahoma City.

**Southwestern Medical Society** meeting at Mangum Jan. 9. The morning was spent in presenting clinical cases. Papers, "Functional Neuroses," L. A. Mitchell, Frederick; "Sarcoma of the Kidney," Frank H. McGregor, Mangum. A banquet was tendered the physicians at Elks Hall, M. M. DeArman having charge of the entertainment, ably assisted by Thos. J. Horsley. Several lay guests attended the banquet and aided in making the occasion a success.

## CORRESPONDENCE AND MISCELLANEOUS

### THE NURSE ANESTHETIST QUESTION.

Muskogee, Okla., January 13, 1917.

Honorable S. P. Freeling, Attorney General,  
Oklahoma City, Oklahoma.

My Dear Mr. Freeling:

The question in some sections of this state has arisen as to the legal right of a trained nurse to administer an anesthetic under the direction of a physician or surgeon. It is contended by some that this is a violation of the law; that the function performed is practicing medicine and one that should be performed by a legally qualified, competent physician.

For the information of the medical profession of this state, would you mind giving us a statement of your opinion?

Thanking you in advance for any information you may give us and with best wishes, I am,

Very truly yours,

C. A. Thompson, Secretary-Editor.

### STATE OF OKLAHOMA OFFICE OF THE ATTORNEY GENERAL

Oklahoma City, February 8, 1917.

Dr. C. A. Thompson,  
Muskogee, Okla.

Dear Sir:

Answering your letter of recent date in which you inquire whether a trained nurse may administer an anesthetic under the direction of a physician or surgeon, you are advised as follows:

Section 6910 describes the acts which shall be deemed and construed as practicing medicine and surgery within the meaning of the laws of Oklahoma, as follows:

"First. Those who prescribe or administer any drug or medicine now or hereafter included in materia medica in the treatment of disease, injury or deformity of human beings, or who profess publicly to be physicians and to prescribe for the sick.

Second. Those who practice major or minor surgery in the treatment of disease, injury or deformity of human beings, except dealers in surgical, dental or optical appliances."

Surely the administration of an anesthetic is included within the first subdivision quoted above, and is without doubt a drug or medicine included in materia medica in the treatment of disease, injury or deformity of human beings.

In the same section further on it is stated:

"But nothing in this article shall be so construed as to prohibit the services in the case of emergency or the domestic administration of family remedies."

Strict interpretation of this law irresistibly forces the conclusion that except in cases of emergency trained nurses are not permitted under the law to administer an anesthetic.

This is not an expression of an opinion as to what the law should be, but what in my opinion it is.

Very truly,

S. P. Freeling, Attorney General.

## STATE BOARD OF MEDICAL EXAMINERS

Tulsa, February 10, 1917.

Dr. Claud A. Thompson,  
Secy. Oklahoma State Medical Assn.,  
Muskogee, Oklahoma.

Dear Doctor:

I am enclosing herewith report of the State Board examination held January 9-10, 1917; also list of questions used.

Yours very truly,

R. V. Smith, Secretary.

## EXAMINATION.

January 9-10, 1917.

Lucile Spire Blachly,.....	Drumright, Okla.	Licensed
Philip Louis Coulter,.....	Tulsa, Okla.	Licensed
Wm. Hotchkiss Bailey,.....	Oklahoma City, Okla.	Licensed
Eldon Marshall Findley,.....	Norman, Okla.	Licensed

## LICENSED BY RECIPROCITY.

Horace Tapley Price,.....	Tulsa, Okla.	Georgia
Jesse Raymond Burdick,.....	Tulsa, Okla.	Nebraska
Wm. Patrick Jenkins,.....	Oakland, Ark.	Arkansas
Wm. Austin Sibley,.....	Owensville, Mo.	Missouri
Charles Daniel Johnson,.....	Tulsa, Okla.	Missouri
Ernest Ball,.....	Dallas, Texas	Texas
John Evans Heatley,.....	Oklahoma City, Okla.	Missouri
Jonathan Dorrough,.....	Paris, Ark.	Arkansas
Russell Duke Stallings,.....	Atlanta, Ga.	Georgia
Wm. Johnson Witt,.....	Colony, Okla.	Mississippi
George Corbin Bryan,.....	Okmulgee, Okla.	California
Thomas Miller Haskins,.....	Tulsa, Okla.	West Virginia
Wm. Logau Carlyle,.....	Sabetha, Kas.	Kansas
Luther Love McDougal,.....	Boonville, Miss.	Mississippi
Clyde Ray Stingily,.....	Jackson, Miss.	Mississippi
Thomas Hundley Seay,.....	Laurel, Miss.	Mississippi
Benjamin Lampton Crawford,.....	Tylertown, Miss.	Mississippi
Thomas Wright Reagan,.....	Union, Miss.	Mississippi
Thomas Fitzgerald Elkin,.....	Tupelo, Miss.	Mississippi
Roland William Hall,.....	Clinton, Miss.	Mississippi
Sam Echols Eason,.....	New Albany, Miss.	Mississippi
John Harvey Johnson,.....	Brookhaven, Miss.	Mississippi
Jacob Daniel Gilleylen,.....	Jackson, Miss.	Mississippi
Wesley William Hall, Jr.,.....	Gunnison, Miss.	Mississippi
Charles Dennis Mitchell,.....	Pontotoc, Miss.	Mississippi
Harvey Franklin Garrison,.....	Seminary, Miss.	Mississippi

## RE-REGISTRATION.

Albert A. Potterf,.....	Kansas City, Mo.
J. A. Noleu,.....	White Oak, Okla.
T. B. Allison,.....	Shawnee, Okla.
R. A. Foshee,.....	Alexander City, Ala.
A. Y. Easterwood,.....	Cleburne, Texas

## COUNCIL ON PHARMACY AND CHEMISTRY.

(Abridged Report)

## NEW AND NON-OFFICIAL REMEDIES.

**Formin Tablets, 5 grains.**—Each tablet contains 5 grains of formin (see New and Non-official Remedies, 1916, p. 138). Merck and Co., New York.

**Formin Tablets, 7 1-2 grains.**—Each tablet contains 7 1-2 grains of formin (see New and Non-official Remedies, 1916, p. 138). Merck and Co., New York.

**Veronal Tablets, 5 grains.**—Each tablet contains 5 grains of veronal (see New and Non-official Remedies, 1916, p. 92). Merck and Co., New York (*Journal A. M. A.*, Jan. 6, 1917, p. 35).

**Urease.**—An enzyme found in certain beans, fungi and micro-organisms which, in the presence of water, converts urea into ammonium carbonate. It is used in the determination of urea in the urine, blood and other body fluids, either by determining the increase in alkalinity of the fluid to which it is added, or else the ammonia produced by it in the fluid is removed and estimated.

**Urease-Squibb.**—A standardized preparation of urease obtained from the jack bean. It is supplied in the form of powder and tablets containing 0.1 gm. E. R. Squibb and Sons, New York.



**Neutral Solution of Chlorinated Soda.**—Solution Chlorinated Soda, Dakin.—Solution Chlorinated Soda, Carrel-Dakin.—A chlorinated soda solution, containing 0.43 to 0.48 per cent. of available chlorine, free from caustic alkali. It is prepared by treating a suspension of chlorinated lime in water with definite amounts of sodium carbonate and sodium bicarbonate and adjusting the separated clear liquid to the required content of available chlorine. The solution is not reddened by phenolphthalein. It must be protected from light. The solution has been used for the irrigation of wounds, especially infected war wounds.

**Theobromine-Merck.**—A brand complying with the standards for theobromine—N. N. R. Merck and Co., New York.

**Acetylsalicylic Acid.**—Acidum acetylsalicylicum. Aspirin. The acetyl derivative of salicylic acid. Dosage: 0.3 to 1.0 gm., repeated once in three hours until symptoms of salicylism are noted. It may be dispensed as powders (in wax paper), wafers or capsules.

**Iocamfen.**—A liquid obtained by the interaction of iodine 10 parts, phenol 20 parts, and camphor 70 parts, containing about 7.25 per cent. free iodine. Iocamfen is said to have the antiseptic and germicidal properties of iodine and also the anesthetic, stimulating and antiphlogistic properties of camphor and phenol. It is used in dressing wounds, etc. Iocamfen is also supplied as Iocamfen Ampules, containing 20 minims Iocamfen. Schering and Glatz, New York. (*Journal A. M. A.*, Jan. 20, 1917, p. 199).

### PROPAGANDA FOR REFORM.

**The J. B. L. Cascade Treatment.**—The "treatment" is exploited by Charles A. Tyrrell, New York City. It consists in the self-administration of rectal anemas by means of a device, the J. B. L. ("Joy-Beauty-Life") Cascade. The "complete treatment" includes a stick of Tyrrell's "famous Rectal Soap" and a box of the "Celebrated J. B. L. Antiseptic Tonic." The "tonic" was analyzed in the A. M. A. Chemical Laboratory and found to be a mixture of sodium chloride and impure borax, colored and perfumed. The laboratory concluded that a preparation having all the "antiseptic" and "tonic" properties of J. B. L. Antiseptic Tonic can be made by mixing 2.8 ounces common salt with 1.3 ounce powdered borax. (*Journal A. M. A.*, Jan. 6, 1917, p. 50).

**Toxicity of Salvarsan and Neosalvarsan.**—Claude L. Shields, M. D., Salt Lake City, reports that out of the last twenty-three injections of neosalvarsan four cases exhibited severe poisoning and one resulted in death. He reports the experience of other physicians of severe toxic symptoms from the use of recent shipments of salvarsan and neosalvarsan. (*Journal A. M. A.*, Jan. 6, 1917, p. 53).

**The Search for the Ideal Antiseptic.**—R. A. Lambert has followed the effect of the same chemical agent on bacteria and tissue cells growing together in vitro. He finds that the growth of tissue cells is more easily affected by potassium cyanide, phenol, trichlorol, hydrogen peroxide and alcohol than was the growth of bacterine. Iodine stands out as the one chemical tested to which tissue cells were found more resistant than were staphylococci. A good growth of cells was seen after exposure to a 1-in-2000 solution of iodine for an hour—a strength sufficient to sterilize the tissue completely in most instances. Lambert points out that the power of iodine to dissolve fibrin may be an objection to its use as an antiseptic wound dressing. (*Journal A. M. A.*, Jan. 6, 1917, p. 40).

**Iron Citrate, Green.**—H. K. Mulford Company and E. R. Squibb and Sons submitted to the Council on Pharmacy and Chemistry ampules containing solutions of iron citrate, green. It thus became necessary for the Council to consider the eligibility of iron citrate, green, itself for admission to New and Non-official Remedies. As the rules of the Council provide that non-essential modifications of official or non-proprietary preparations will not be recognized, the above named firms were asked to state what advantage, if any, the so-called iron citrate, green, has over the official iron and ammonium citrate. Inasmuch as no evidence was presented to show that iron citrate, green, has any advantage over the well known iron and ammonium citrate, the Council held that iron citrate, green, and with it the dosage forms, were ineligible to New and Non-official Remedies. Advised of this decision, the Mulford Company replied that in the present case it felt bound to supply the existing demand. Squibb and Sons replied that, to give the Council its support in this matter, the sale of iron citrate, green, and ampules thereof would be discontinued. (*Journal A. M. A.*, Jan. 13, 1917, p. 135).

**Acetylsalicylic Acid, Not Aspirin.**—While Aspirin-Bayer has been omitted from New and Non-official Remedies, the product is retained under its scientific name, acetylsalicylic acid, and standards are provided to ensure the reliability of the market product. The Aspirin patent expires in February, 1917, and after this time other manufacturers may make and sell the product. One firm's brand, that of the Powers-Weightman-Rosengarten Co., has been accepted for New and Non-official Remedies, 1917. Hereafter physicians, when prescribing the compound, should use the scientific name "acetylsalicylic acid." (*Journal A. M. A.*, Jan. 20, 1917, p. 201).

**Aspirin-Bayer Omitted from N. N. R.**—Aspirin-Bayer is advertised to the public, indirectly by means of "vest-pocket" boxes bearing the name "Aspirin" permanently affixed, and directly by means of extensive newspaper advertising. Inasmuch as this advertising propaganda is an infringement of the rules of the Council and is against the interests of public health, the Council voted to omit Aspirin-Bayer from New and Non-official Remedies. (*Journal A. M. A.*, Jan. 20, 1917, p. 213).

**More Misbranded Nostrums.**—The following "patent medicines" have been declared misbranded under the U. S. Food and Drugs Act, chiefly because unwarranted curative claims were made for them: Dr. Thatcher's Liver and Blood Syrup, claimed to cure all liver complaints and many other ailments. Black's Pulmonic Syrup, a water-alcohol solution of ichthyol, glycerin and sugar. Walker's Pain Destroyer, an alcoholic solution of oil of mustard, chloroform, opium and colloidion. Musterole,

a mixture of lard or some similar material with oil of mustard, menthol and camphor. Snyder's Bitters, claimed to eradicate serofulous humors, syphilitic affections, cancerous humors and many other ailments. "Five Drops," a mixture of eucalyptol (or a eucalyptol-containing oil), camphor, safrol, terpineol and eugenol (or an oil containing those ingredients, such as camphor oil). Dr. Stuart's Specific Drops, a mixture of camphor, alcohol, mercuric iodid and turpentine. (*Journal A. M. A.*, Jan. 20, 1917, p. 214-15.)

**Pil. Cascara Compound-Robins** (A. H. Robins Company, Richmond, Va.)—The Council on Pharmacy and Chemistry reports that Pil. Cascara Compound-Robins is an example of the innumerable mixtures of well known drugs having nothing in the way of originality or of special therapeutic value to recommend them. The claim that the pills contain no belladonna when they admittedly contain hyoscyamus is, in view of the similar action of these two drugs, a manifestation of ignorance on the part of the manufacturer or an effort to impose on the medical profession. The promotion of this mixture as "an ideal aid to any remedial agent when a mild, medium or strong alimentary stimulant is needed" is a slur on the intelligence of physicians. The Council finds Pil. Cascara Compound-Robins not acceptable for New and Non-official Remedies. (*Journal A. M. A.*, Jan. 27, 1917, p. 303).

**Casta-Flora.**—The Council on Pharmacy and Chemistry reports that Casta-Flora, put out by the Wm. S. Merrell Chemical Co., is one of those complex preparations which are offered to the medical profession with plausible arguments in support of the claims made. The Council finds the claims made for this mixture of drugs—which is said to contain or represent chestnut leaves, passion flower, gelsemium, elecampane, "Iodized lime," menthol and yerba santa—and for the individual ingredients thereof, extravagant and misleading. Even if the ingredients, or certain of them, were useful in the treatment of those conditions for which Casta-Flora is recommended, no one could possibly foresee the effects in any given case from this jumble of drugs. The Council holds that the prescribing of such mixtures, the action of which cannot be foreseen, is plain charlatanism and declares Casta-Flora inadmissible to New and Non-official Remedies. (*Journal A. M. A.*, Jan. 27, p. 303).

#### IF DOCTORS ONLY TOLD. (?)

If Doctors would only tell  
 The erooked things in life,  
 The secrets of the human race,  
 Told him in their strife  
 To hide dishonor and disgrace,  
 When asking aid of them:  
 IF DOCTORS ONLY TOLD. (?)

If Doctors would only tell  
 The truth to hypochondriacs,  
 Who always catch the new disease  
 From reading the almanacs;  
 Send them out to catch a "Fraid,"  
 Or shovel away the frosty breeze.  
 IF DOCTORS ONLY TOLD. (?)

If Doctors would only tell  
 The things that are told to him;  
 When rumor besmirched a maiden's name,  
 And the sin was with the most of them,  
 While they were treading satan's lane,  
 Spreading the slanderous venom: then,  
 IF DOCTORS ONLY TOLD. (?)

If Doctors would only tell  
 When things are said of him:  
 "He is not fit to enter the home,  
 Or touch the garments hem,  
 Nor is he safe to leave alone,  
 For the sanctity of the home."  
 IF DOCTORS ONLY TOLD. (?)

If Doctors would only tell  
 What they know of all the rest,  
 When all have slandered him,  
 Misconstrewed his every jest:  
 When he is condemned by lying tongue,  
 Shut-mouthed he's kept their secret mum:  
 IF DOCTORS ONLY TOLD. (?)

—J. W. Echols.

## OFFICERS OF COUNTY SOCIETIES

County	President	Secretary
Adair .....	J. Patton, Stilwell	A. J. Sands, Watts
Alfalfa .....	S. B. Growden, Cherokee	L. T. Lancaster, Cherokee
Atoka .....		
Beaver .....		
Beckham .....	J. F. Yarbrough, Erick	K. R. Rone, Elk City
Blaine .....	M. W. Buchanan, Watonga	J. A. Norris, Okeene
Bryan .....	J. H. Shuler, Durant	D. Armstrong, Mead
Caddo .....	W. T. Hawn, Binger	C. R. Hume, Anadarko
Canadian .....	P. F. Herod, El Reno	W. J. Muzzy, El Reno
Choctaw .....	V. L. Person, Boswell	E. R. Askew, Hugo
Carter .....	J. C. Best, Ardmore	R. H. Henry, Ardmore
Cleveland .....	J. N. Williams, Norman	Gayfree Ellison, Norman
Cherokee .....	W. B. Blake, Tahlequah	C. A. Peterson, Tahlequah
Custer .....	M. C. Comer, Weatherford	S. C. Davis, Clinton
Comanche .....	L. A. Milne, Lawton	G. Pinnell, Lawton
Coal .....	J. B. Clark, Coalgate	A. Cates, Tupelo
Cotton .....	M. T. Clark, Temple, R. R. No. 1	G. O. Webb, Temple
Craig .....	C. S. Neer, Vinita	W. R. Marks, Vinita
Creek .....	C. D. Blachley, Drumright	H. S. Garland, Sapulpa
Dewey .....		
Ellis .....		
Garfield .....	W. L. Kendall, Enid	James H. Hays, Enid
Garvin .....	G. L. Johnson, Pauls Valley	N. H. Lindsey, Pauls Valley
Grady .....	E. E. Dawson, Chickasha	Martha Bledsoe, Chickasha
Grant .....		C. H. Lockwood, Medford
Greer .....	E. M. Poer, Mangum	T. J. Horsley, Mangum
Harmon .....		
Haskell .....	M. VanMatre, Keota	J. R. Waltrip, Kinta
Hughes .....		
Jackson .....	D. C. Buck, Eldorado	W. H. Rutland, Altus
Jefferson .....	G. C. Wilton, Ryan	J. I. Derr, Waurika
Johnson .....	C. B. Ballard, Mannsville	H. B. Kniseley, Tishomingo
Kay .....		
Kingfisher .....	C. E. Wagoner, Hennessey	Chas. W. Fisk, Kingfisher
Kiowa .....	Wm. McIlwain, Lonewolf	A. L. Wagoner, Hobart
Latimer .....		E. B. Hamilton, Wilburton
Le Flore .....		
Lincoln .....		
Logan .....	A. A. West, Guthrie	A. M. Marshall, Chandler
Love .....		E. O. Barker, Guthrie
Mayes .....	J. E. Hollingsworth, Strang	W. C. Bryant, Choteau
Major .....		
Marshall .....	A. E. Ballard, Madill	O. E. Wellborn, Kingston
McClain .....	J. W. West, Purcell	O. O. Dawson, Wayne
McCurtain .....		C. R. McDonald, Broken Bow
McIntosh .....	W. P. Lee, Checotah	Wm. A. Tolleson, Eufaula
Murray .....	J. A. Adams, Sulphur	W. H. Powell, Sulphur
Muskogee .....	I. B. Oldham, Muskogee	J. G. Noble, Muskogee
Noble .....	Bruce Watson, Perry	T. F. Renfrow, Billings
Nowata .....	J. E. Brookshire, Nowata	J. R. Collins, Nowata
Okfuskee .....	H. A. May, Okemah	Jno. L. Sims, Weleetka
Oklahoma .....	L. J. Moorman, Oklahoma City	F. B. Sorgatz, Oklahoma City
Okmulgee .....	N. N. Simpson, Henryetta	H. E. Breese, Henryetta
Ottawa .....	R. F. Von Cannon, Miami	G. P. McNaughton, Miami
Osage .....	J. M. Ennis, Pawhuska	Benj. Skinner, Pawhuska
Pawnee .....		
Payne .....	E. M. Harris, Cushing	J. B. Murphy, Stillwater
Pittsburg .....	J. O. Gruhlis, N. McAlester	J. C. Johnston, McAlester
Pottawatomie .....	J. H. Scott, Shawnee	G. S. Baxter, Shawnee
Pontotoc .....	C. L. Orr, Ada	M. L. Lewis, Ada
Pushmataha .....		
Rogers .....	W. E. Smith, Collinsville	W. A. Howard, Chelsea
Roger Mills .....		
Seminole .....		
Sequoyah .....		
Stephens .....	E. B. Thomason, Velma	J. M. Nieweg, Duncan
Texas .....	W. H. Langston, Guymon	R. B. Hays, Guymon
Tulsa .....	A. W. Roth, Tulsa	W. Forest Dutton, Tulsa
Tillman .....	A. J. Ilay, Frederick	J. E. Arrington, Frederick
Wagoner .....	F. W. Smith, Wagoner	J. L. Reich, Wagoner
Washita .....	D. W. Bennett, Sentiuel	A. S. Neal, Cordell
Washington .....	W. E. Rammel, Bartlesville	J. G. Smith, Bartlesville
Woodward .....	Ralph Workman, Woodward	C. W. Tedrowe, Woodward
Woods .....	Isaac Hunt, Freedom	D. B. Ensor, Hopeton



## OFFICERS OF OKLAHOMA STATE MEDICAL ASSOCIATION—ELECTION MAY 11, 1916.

Meeting Place—Lawton-Medicine Park, May 8, 9, 10, 1917.

President, 1916-17—Dr. Chas. R. Hume, Anadarko.

President-elect, 1917-18—Dr. W. Albert Cook, Tulsa.

1st Vice-President—Dr. Fowler Border, Mangum; 2nd Vice-President—Dr. A. R. Lewis, Ryan;  
3rd Vice-President—Dr. Horace Reed, Oklahoma City.

Secretary-Treasurer-Editor—Dr. C. A. Thompson, Muskogee.

Delegates to American Medical Association—Dr. John Riley, Oklahoma City, 1917; Dr. M. A. Kelso, Enid, 1917-18.

## COUNCILOR DISTRICTS.

1. Cimarron, Texas, Beaver, Harper, Ellis, Woods and Woodward; Councilor, Dr. J. M. Workman, Woodward. Term expires 1919.
2. Roger Mills, Beckham, Dewey, Custer, Washita and Woodward; Councilor, Dr. Ellis Lamb, Clinton.
3. Harmon, Greer, Jackson, Kiowa, Tillman, Comanche and Cotton; Councilor, Dr. G. P. Cherry, Mangum.
4. Major, Alfalfa, Grant, Garfield, Noble and Kay; Councilor, Dr. G. A. Boyle, Enid. Term expires 1919.
5. Kingfisher, Canadian, Oklahoma and Logan; Councilor, Dr. Fred Y. Cronk, Guthrie.
6. Caddo, Grady, McClain, Garvin, Stephens and Jefferson; Councilor, Dr. C. M. Maupin, Waurika. Term expires 1919.
7. Osage, Pawnee Creek, Okfuskee, Okmulgee and Tulsa; Councilor, Dr. Walter E. Wright, Tulsa.
8. Payne, Lincoln, Cleveland, Pottawatomie and Seminole; Councilor, Dr. H. M. Williams, Wellston.
9. Pontotoc, Murray, Carter, Love, Marshall, Johnston and Coal; Councilor, Dr. J. T. Slover, Sulphur.
10. Washington, Nowata, Rogers, Craig, Ottawa, Mayes and Delaware; Councilor, Dr. R. L. Mitchell, Vinita.
11. Wagoner, Muskogee, McIntosh, Haskell, Cherokee and Adair; Councilor, Dr. P. P. Nesbitt, Muskogee.
12. Hughes, Pittsburg, Latimer, LeFlore and Sequoyah; Councilor, Dr. L. S. Willour, McAlester. Term expires 1919.
13. Atoka, Pushmataha, Bryan, Choctaw and McCurtain; Councilor, Dr. J. L. Austin, Durant.

## CHAIRMEN OF SCIENTIFIC SECTIONS.


- Surgery and Gynecology—Dr. McLain Rogers, Clinton.  
 Pediatrics and Obstetrics—Dr. L. W. Cotton, Enid.  
 Eye, Ear, Nose and Throat—Dr. A. W. Roth, Tulsa.  
 General Medicine, Nervous and Mental Diseases—Dr. A. K. West, Oklahoma City.  
 Genitourinary, Skin and Radiology—Dr. C. R. Day, Oklahoma City.  
 Legislative Committee—Dr. Millington Smith, Oklahoma City; Dr. J. M. Byrum, Shawnee;  
 Dr. W. T. Salmon, Oklahoma City.  
 • For the Study and Control of Cancer—Drs. LeRoy Long, Oklahoma City; Gayfree Ellison, Norman; D. A. Myers, Lawton.  
 For the Study and Control of Pellagra—Drs. A. A. Thurlow, Norman, L. A. Mitchell, Frederick; J. C. Watkins, Checotah.  
 For the Study of Venereal Diseases—Drs. Wm. J. Wallace, Oklahoma City; Ross Grosshart, Tulsa; J. E. Bercaw, Okmulgee.  
 Necrology—Drs. Martha Bledsoe, Chickasha; J. W. Pollard, Bartlesville.  
 Tuberculosis—Drs. L. J. Moorman, Oklahoma City; C. W. Heitzman, Muskogee; Leila E. Andrews, Oklahoma City.  
 Conservation of Vision—Drs. L. A. Newton, Guthrie; L. Haynes Buxton, Oklahoma City; G. E. Hartshorne, Shawnee.  
 Committee on First Aid—Drs. F. H. Clark, El Reno; Chas. Blickensderfer, Shawnee; Jas. C. Johnston, McAlester.  
 Committee on Medical Education—Drs. A. L. Blesh, A. K. West, A. W. White, Oklahoma City  
 State Commissioner of Health—Dr. John W. Duke, Guthrie, Oklahoma.

## STATE BOARD OF MEDICAL EXAMINERS.

- LeRoy Bonnell, President, Chickasha; R. V. Smith, Secretary, Tulsa; J. J. Williams, Weatherford; B. L. Dennison, Vice Pres., Garvin; W. T. Ray, Gould; M. Gray, Mountain View; H. C. Montague, Muskogee, and O. R. Gregg, Alva.  
 Reciprocity with Georgia, Kentucky, Mississippi, Nevada, North Carolina, Wisconsin, Kansas, Michigan, Nebraska, New Mexico, South Dakota, Tennessee, West Virginia.  
 Meetings held second Tuesday of January, April, July and October, Oklahoma City.  
 Address all communications to the Secretary, Dr. R. V. Smith, Daniel bldg., Tulsa.

# THE JOURNAL

of the



## Oklahoma State Medical Association

VOLUME X

MUSKOGEE, OKLA., APRIL, 1917

NUMBER 4

### PELLAGRA\*

#### A SYMPOSIUM

The Prevalence of Pellagra in Oklahoma, J. L. Day, M. D., Norman, Oklahoma.

Diagnosis and Symptomatology of Pellagra, Chas. R. Hume, M. D., Anadarko, Oklahoma.

Management and Treatment of Pellagra, J. C. Watkins, M. D., Checotah, Oklahoma.

### THE PREVALENCE OF PELLAGRA IN OKLAHOMA.

J. L. DAY, M. D., Norman, Okla.

The Committee for the Study and Control of Pellagra concluded that instead of presenting a formal report on a subject about which there is such a varied opinion and so little certainly known, a symposium on pellagra to be given before the general medical section might be of some real value. Accordingly the following subjects were chosen and presented: "Prevalence of Pellagra in Oklahoma," by Dr. J. L. Day of Norman; "Diagnosis and Symptomatology of Pellagra," by Dr. C. R. Hume of Anadarko; "Management and Treatment of Pellagra," Dr. J. C. Watkins of Checotah.

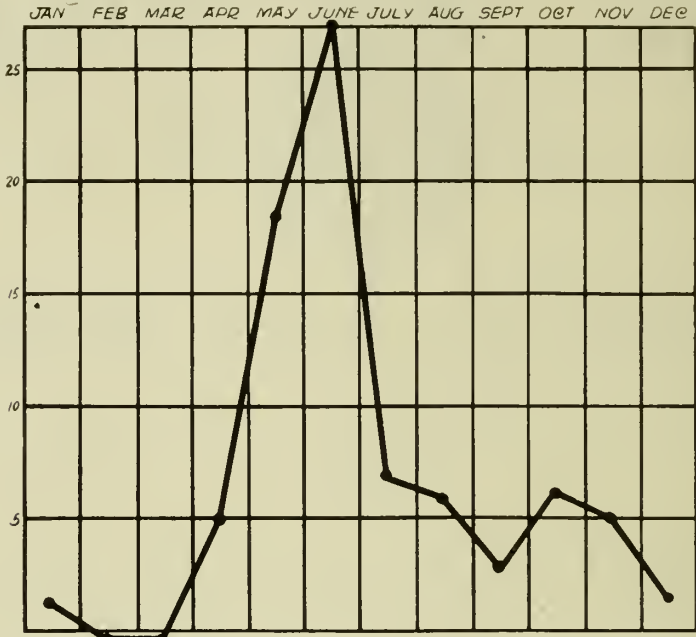
Pellagra is known to have existed in Oklahoma for several years, but during the last two or three years so much attention has been called to this disease that by some it was thought to have become epidemic. Only as late as the fiscal year 1914-1915 has the State Board of Health made it a reportable disease. Therefore the facts presented in this study have only limited value. The statistics for this study were obtained from the following sources: The State Board of Health, and the State Hospitals for the Insane.

Chart No. 1 shows the cases reported to the State Board of Health from October 1, 1914, to September 30, 1915, inclusive. The total reported cases number 81. Practically all are from eastern or southern counties, yet many counties report none, though as will be seen by other charts these same counties show several cases sent to the state institutions.

Chart No. 2 gives the number of deaths for the same period by counties to be 141. This clearly indicates that not all cases are reported prior to death. The large number (26) from Cleveland County are practically all from the State Hospital.

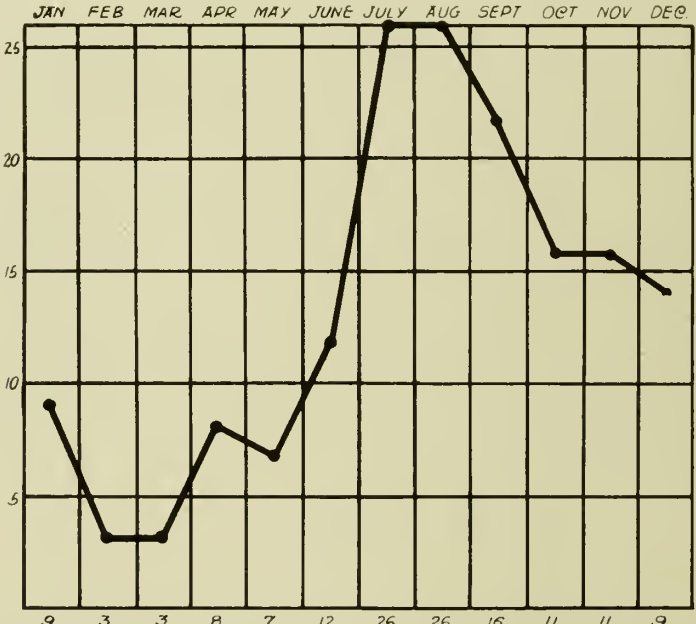
Charts Nos. 3 and 4 indicate the cases and deaths respectively by months, as reported to the State Board of Health for period October 1, 1914, to September 30, 1915, inclusive. This emphasizes the fact that pellagra is a summer disease, 27

\*Read in Section on General Medicine, Oklahoma State Medical Association, May 10, 1916.



CASES OF PELLAGRA REPORTED TO STATE BOARD OF HEALTH  
OCT. 1, 1914 ~ SEPT. 30, 1915

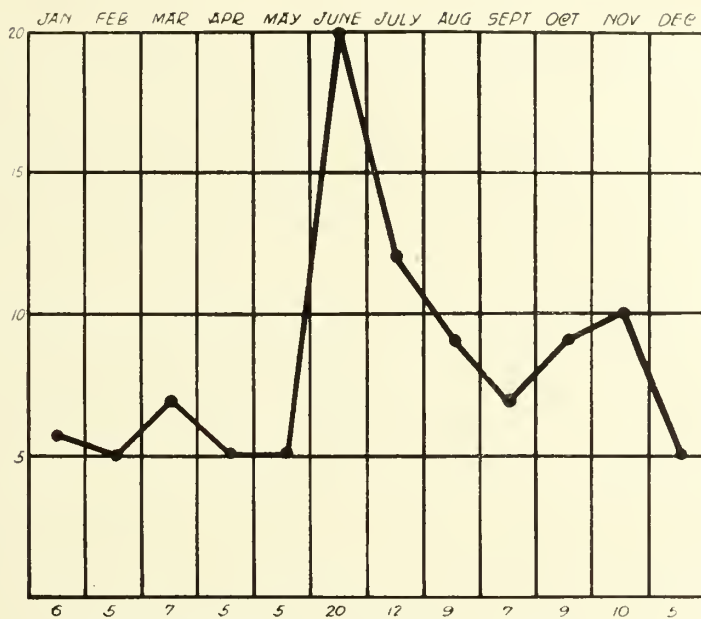
Chart 3



DEATHS FROM PELLAGRA - STATE BOARD OF HEALTH RECORD  
OCT 1, 1914 ~ SEPT 30, 1915

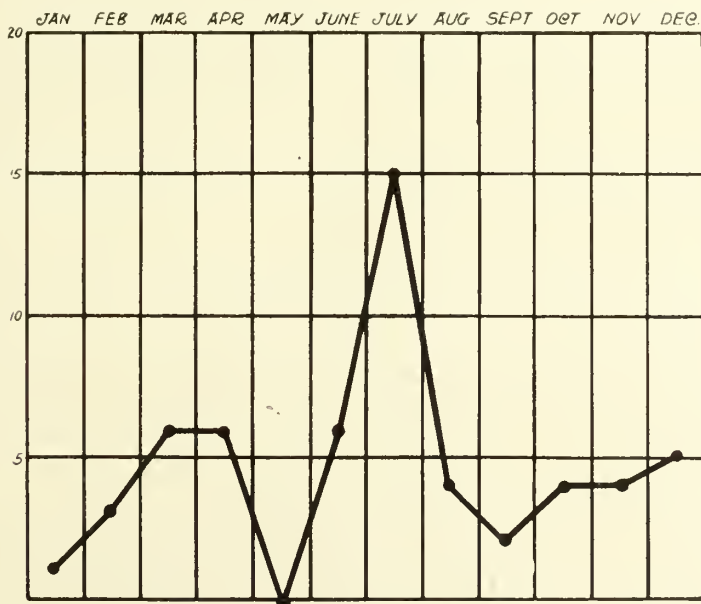
Chart 4





STATE HOSPITAL RECORD - NORMAN  
ADMISSIONS MAY 1, 1914 - APR 30, 1916

Chart 6



PELLAGRA STATE HOSPITAL RECORD - NORMAN  
DEATHS - MAY 1, 1914 - APRIL 30, 1916

Chart 7

cases were reported in June and 26 deaths occurred during both July and August.

In Chart No. 5 (o) indicates the admission to the Oklahoma State Hospital at Norman for period May 1, 1914, to September 30, 1915, (\*) represents the deaths by counties for the same period. There were during this period 100 admissions with 56 deaths. Of course, this is not at all to be taken as the average death rate, for none of these patients were received till they had shown mental symptoms and many were brought in practically a dying condition. Here again may be noted the great number from the southern and eastern part of the state. Many counties, notably Pontotoc, sent many insane pellagrins to Norman, yet reported no cases to the State Board of Health.

Charts Nos. 6 and 7 show the admissions and deaths respectively for the same period by months. This, of course, corresponding to the record of the State Board of Health.

In Chart No. 8 (o) indicates the admissions and (\*) the deaths by counties as reported from the State Hospital at Vinita. This further emphasizes the greater number of cases from the eastern and southern counties. There were no cases of pellagra reported at the State Hospital for the Insane at Supply during the period under consideration.

From the information as shown on the foregoing charts it seems that the following conclusions can be safely drawn:

Physicians are not reporting all of the cases.

Pellagra is for some reason much more prevalent in the southern and eastern part of the state.

Both the number of cases and deaths are much greater during the hot summer months.

A very large number (the actual percentage is not known) were in patients from very unsanitary surroundings and occurred among those who had other wasting diseases.

Pellagra can not be called epidemic in Oklahoma.

---

## DIAGNOSIS AND SYMPTOMATOLOGY OF PELLAGRA.

CHAS. R. HUME, M. D., Anadarko, Okla.

In considering the diagnosis of pellagra, we are at once confronted with the fact that on account of the uncertainty of its etiology we are deprived of all assistance that might otherwise be rendered by microscopic or laboratory findings.

A diagnosis must therefore be made independently of any idea of its causation or of any theory regarding the etiology, relying wholly on the clinical symptoms presented at time of examination coupled with such other symptoms as may be elicited by a careful inquiry regarding past history.

The clinical picture of a well defined and fully developed case of pellagra is so typical and impressive that there can be no question of the diagnosis. We will have exhibited the three-fold group of clinical symptoms, namely, nervous, gastrointestinal, and cutaneous. This so-called triad of symptoms may not all be prominent at one time, but a history of the case will show all three classes of symptoms to have developed at some time during the course of the disease.

Of the cerebro-spinal symptoms we find complaint of a feeling of exhaustion, loss of energy, a continued sense of lassitude, insomnia without external cause, exaggerated reflexes, neuralgia and rheumatic pains, headache and vertigo. In females the symptoms are often of a gynecologic character, pains in uterus and around the ovaries, disturbance of menstruation, etc. Mental depression, morbid anxiety, a general expression of sadness and a condition of neurasthenia leading in a good per cent of cases to some form of insanity.

Symptoms of the digestive tract are stomatitis, esophageal burning, gastralgia, nausea, dyspepsia, diarrhoea usually, constipation rarely. The tongue often is red and pointed, gums and buccal membrane ulcerated, salivary glands secreting profusely, a condition resembling salivation from mercurial poisoning. The cutaneous group of symptoms are pathognomonic of pellagra and when found in connection with other conditions mentioned our diagnosis is at once confirmed. A bright red erythematous area appears on the dorsum of both hands, symmetrical in its distribution, forming a curved line of demarcation as it fades about the wrist. The eruption sometimes appears on the dorsum of the feet and sides of neck and face. The eruption is at first bright red, resembling sunburn, but may after a few days change to purplish or reddish brown, with slight oedema. After a few days the eruption dries and small grayish scales form and fall off. The dorsum of the hands and skin between the fingers remains pigmented, dry, cracked, and fissured.

I have outlined in abridged form the clinical picture of the pellagrin, when in the course of his malady he is ready to fall into the hands of the dermatologist or the asylum physician.

We, as general practitioners, if we are going to be of any use to these poor sufferers, must be on the alert and be able to diagnose the disease long before this train of symptoms has developed. Whatever uncertainty there may be as to the precise etiology of pellagra, there is the certainty that it is an infection caused by a definite toxic agent which attacks primarily the central nervous system. We see some cases without skin lesions, others without stomatitis, others without gastric or intestinal symptoms, but some nervous symptom is always present. The patient may not be nervous in the ordinary sense of the word, but some nervous symptom will always be found, such as increased reflexes, slight vertigo, or some other symptom referable to the cerebro-spinal system which, existing alone, could not enable one to make a diagnosis. The symmetrical distribution of the skin eruptions shows that a central nervous pathological condition has retarded the nourishment of the skin on both sides of the body alike. The same faulty innervation of the gastrointestinal tract may give rise to the train of disorders noted in that region.

During 1915 the United States Public Health Service conducted an interesting experiment on the farm of the Mississippi State penitentiary. A squad of eleven prisoners volunteered to be placed on a restricted one-sided, mainly carbohydrate diet. Thereupon eleven healthy white prisoners ranging in age from 24 to 50 years, under an offer of pardon from the Governor, accepted the terms of this experiment. They were placed on the restricted diet February 4, 1915, and continued to subsist on this diet until October 31st.

As a result of the eleven volunteers, six developed symptoms justifying a diagnosis of pellagra. Loss of weight and strength and mild nervous symptoms appeared early. The gastro-intestinal symptoms were slight. Definite cutaneous manifestations were not noted until September 12th, or about five months after the beginning of the restricted diet. In all six cases the skin lesions were first noted on the scrotum. Later the eruption also appeared on the hands in two of the cases, and on the back of the neck in one. For further consideration of this experiment see *Journal A. M. A.*, February 12; and *Public Health Bulletin on Pellagra*, 1915, from which I have quoted.

In this connection I might also call your attention to research work now being done by the Pellagra Laboratory, U. S. Public Health Service, at Spartansburg, S. C. Notwithstanding the uncertainty of the precise etiology, certain facts in regard to the metabolism of persons suffering from the disease stand out clearly demonstrated, such as gastric anacidity and the presence of indicanuria. It seems more than probable that these government investigators are in pursuit of the real cause. So that we will soon be able to verify the diagnosis by positive laboratory findings while the disease is still in its incipency.



## MANAGEMENT AND TREATMENT OF PELLAGRA.

J. C. WATKINS, M. D., Checotah, Okla.

The management and treatment of pellagra is a question of profound moment; one which I feel very inadequate to handle. To begin with I have my doubts if there has ever been a case of pellagra cured by the administration of drugs. To date there is no known specific; therefore we have to treat it empirically as we did malaria, yellow fever, etc., before we knew the cause.

As in many other diseases, the diagnosis of pellagra should be made early and treatment started at once if any good is to be expected. Pellagra, being a chronic disease, the cure is not to be expected in a few days. Treatment should be started with the first spring symptoms and continued throughout the summer. Then a course of treatment each spring and fall whether there are any symptoms appearing or not. There is no line of treatment applicable to all cases nor to a limited few, but every case is a law unto itself.

The management in the home is much more difficult than those cases in hospitals; especially if the home happens to be in the country, far from even the small town.

My experience the past three years with about twenty cases of pellagra has about led me to the conclusion that drugs in this disease have little effect, other than to control special symptoms as they arise. I have tried everything that I have heard recommended in medical literature. The following is a list of some of the drugs that I have used: Arsenic, in most all forms, thymol, quinine, ichthyol, iron, calomel, bismuth, santonine, calcium, sulphide, salol, sodium citrate, picric acid, nitric acid, lactic acid bacilla, and auto-sero therapy. I get just as good results with one as with any of the others; and equally as good without any.

I have tried not to mention etiology, but I can hardly talk about the treatment of pellagra without referring to cause. As we are somewhat skeptical about the medical treatment, I am not very enthusiastic about the dietary treatment. I am not convinced as yet about the unbalanced rations being the cause. I don't believe the people of the South are living on any more of an unbalanced diet today than ever before and I am sure not as much so as in the days following the civil war.

I believe in a rigid diet in most all diseases, I believe in a balanced diet in all diseases and in health as well. I insist on a diet in pellagra, and my regular "menu" is fresh eggs, fresh milk, fresh lean meat, pork and beef, and green vegetables. I restrict the use of bread, potatoes, sugar, etc. I prohibit heat, either direct sun rays or artificial. I insist on passive exercise between suns, in cases that are able to go. In severe acute cases I demand absolute rest in bed. I advise a change of climate, going to a cooler country, but this being a disease of the "idle poor," they don't take to this advise very radically. A few of my pellagra patients, however, have left me, but not having had any direct communication from them, I am not prepared to say if they went to a cooler or hotter country than Oklahoma.

As an apology for this paper, I want to say that we prepared a scientific paper, mostly a copy of what has gone on before, but it found its way to the waste basket, and instead have endeavored to tell you how we try to manage these cases out in the tall timber over on the east side. Now, in conclusion, if I can precipitate a discussion or a criticism, so that I may learn something about this very important subject, I will be satisfied.

### Discussion.

**Dr. C. R. Day, Oklahoma City:** In the study of pellagra, the etiology was and is considered the most important phase. Both Drs. Hume and Watkins referred to the etiology in their papers. It has been but a few months since Dr. Goldberg presented a statement of his investigations and conclusions regarding the etiology of pellagra. It was my pleasure this fall to spend some time in the Rockefeller

Institute and they believe Dr. Goldberg is entirely right. I was in Washington, D. C., and I learned that there they believed Dr. Goldberg's theory correct. I went to Atlanta, Ga., for the purpose of finding out conditions regarding pellagra in the South. I spent some time with Dr. Harris and reviewed with him the work being done in the well equipped laboratories of the State of Georgia. I was informed that the men in the vicinity of Atlanta did not agree with Dr. Goldberg on a single point. Dr. Harris is of the opinion that the etiology of pellagra will yet be discovered through investigations of the corn theory. His belief is that a toxin developing fungus grows upon the corn and that the toxin produced by this fungus causes the disease. He said everyone who lived on a farm knew how to select seed corn, rejecting grains that showed evidence of fungus about its attachment to the cob. This fungus is the one he believes responsible for the trouble. His opinion was that it acted in the same manner when introduced into the system as vaccines made from other organisms.

The more we study about the disease and read the investigations of those who are attempting to solve the question of etiology, the more we find ourselves at sea. I hope that Oklahoma, in the near future, will be so organized that we may let other states know that we are really attempting to solve these questions ourselves.

**Dr. F. M. Adams, Vinita:** I want to make a report of the number of cases I gave Dr. Day. They do not represent a normal year for the east side of the state.

As regards the etiology, I cannot add anything to what has been said. I have no ideas of my own, but I am inclined to think an unbalanced diet has more to do with it than anything that has been known, and every treatment to be thought of has been used. During my first year at the institution we used every drug that was ever recommended, and I feel like we got no results whatever. During the last year we have been using diet. We give our patients oatmeal and no cream, and no sugar. Beef steak, eggs, roast beef, beans every day, peas, and during this season of the year, of course we give them all the green stuff we can. We give them no sugar. We give them eggs three times a day, and we have found in lots of cases we have gotten results. They come to us practically dead. The most of them die the first week in the hospital, and if we can move them at all we think we are succeeding. In fact one died before we got him into the hospital. If they could be given hygienic care and diet I think they could be helped. But we wait so long to send them to the institution that the death rate runs high, as shown by Dr. Day's statistics.

I might say a word about the mental symptoms. I believe the text books tell us in describing the mental symptoms that they are almost like typhoid fever. I do not think so. We have a case now that has been in the hospital for two months. He has not spoken a word until the last week. I have two other cases who are badly excited. I believe most of the cases are a kind of hysteria rather than mania.

**Dr. Stobaugh, Mannsville:** I do not believe that pellagra has a pathological entity. I believe it is a physical disease that is responsible. I have had two cases. A young lady fell into my hands two years ago. She had all the symptoms of pellagra. I told the mother to feed this girl all she could eat; to make her eat; to put nothing on her hands except starch, and we force-fed that girl for three weeks and she is now a well woman. I have had two other similar circumstances where I used force-feeding and tried to get them to thinking of the sweeter and happier side of life, and my patients have all gotten well, and this you call pellagra today is only a physical condition.

**Dr. Montgomery, Marlow:** I reckon I brought the first case of pellagra into Oklahoma that was ever in the state. I went to Southwestern Texas about six or seven years ago and brought my sister here. They were living about forty miles from the railroad, on canned goods, etc., trying to get rich quick, you know, and she developed pellagra. She would nearly bleed to death at the end of every month. I wrote her to go to Pecos and see whether she could get relief, and she went two or

three times, and she finally got down in bed; her husband wrote me and I went out there and saw the conditions and I brought her back home with me and I put her in a dark room and fanned her and fed her on sweet milk, and she got well. She was entirely in the bed. She had to be carried wherever she went. She could not retain her food at all. She vomited every bit of it up. Her husband divided blood with her. We gave her about two pints of blood, and that kind of started her off, while together with the sweet milk she entirely recovered.

**Dr. Day,** closing: I think there is hardly anything to prove our knowledge concerning pellagra except it is in a very chaotic condition. It is not my case, it is not your case, it is not my dozen or hundred cases, or your dozen or hundred cases that amount to a row of pins, but it is the whole country. These things are not presented as a last word but just to contribute our mite and hoping it may be a little benefit. I would like to call your attention to an article in the last issue of the A. M. A. It seems to coincide with the work Dr. Goldberg has been doing. He puts forth a very interesting idea concerning the preparation of diet, drawing out the fact that pellagra is caused by a lack of some elements in foods, and it seems to me there is probably something wrong in the process of milling the corn.

**Dr. Watkins:** If the patient suffering with pellagra is not crazy, the doctor will be if he has as much trouble with them as I have had. There has been a great deal of work along the lines of trying to find out the cause of pellagra, also the treatment. One man will get good results from one thing and cure his patients, and another will take the same thing and will lose his patients.

I had one family of five. The mother died. The other four got well. One I gave urotropin. A little girl of six years, and I gave her twenty grains a day. She has never had any returns of the symptoms. That was three years ago. I gave another distilled water and nothing else, and she got well. Another I gave arsenic. That is a good deal the line of experience I have had with these cases.

I do not understand why, but from the reports of the State Health Department we have no cases or deaths reported. I have reported them all to the county health commissioner.

### FRACTURES OF THE FEMUR.

In the treatment of the fractures of the femur, F. E. Peckham, Providence, R. I. (*Journal A. M. A.*, Feb. 10, 1917), advises double traction from both directions when the middle third is involved. Elevation of the bed is usually necessary, but to get really efficient counterextension, a well padded perineal band is placed in the groin, one of the straps going over the front of the body, the other going beneath the body with a pulley at the head of the bed. Weights are then added to the foot and head of the bed according to the necessities in the individual case. If this "two way" pull is kept up constantly and efficiently, usually only one thing can happen, and that is, the fragments will be pulled down so that in the middle third they will almost fall into apposition. Coaptation splints may be placed about the leg, but they do not need to be really adjusted and tightened until the leg is down to length. Now and then a strand of tissue may be caught to hold one end from just going into position, and pressure and then counter-pressure by pads beneath the coaptation splints will usually correct this. If a large piece of muscle is between the bone it can generally be removed without disturbing the splints and traction method. It occurred also to Peckham that in fractures of the hip this same countertraction could be applied without the use of the plaster spica. By experiment he found that if the leg was pulled down to length and strongly internally rotated, the broken ends became locked in apposition. The internal rotation is easily accomplished by rotary pulls with adhesive plaster straps extending around the leg from the top over the inside and under the leg, then passing up over a particularly wide T splint. Cases are reported illustrating the mechanics involved and the success of the methods used.



## INFECTIONS OF CHILDHOOD.\*

WINNIE M. SANGER, M. D., Oklahoma City.

Research and experimentation have brought us to the point where biologic therapy is to be considered in the treatment of infectious diseases of children, even as any other therapeutic measure, and often the most important, to be considered.

With all their complex theories, the biological specialist speaks in terms confusing to the inexpert graduate of a dozen or more years ago, but we must, through our own research of text-books and journals, know the underlying principles before we are justified in the use of vaccine and serum therapy.

By the term infection, we understand a manifestation of disease, due to the entrance of micro-organisms, as living agents that multiply and act on the various tissues of the human body. These are pathogenic organisms, when symptoms and signs of disease are produced, though such organisms may be present in the body, without symptoms of disease.

Characteristics of infecting organisms in the production of an infection are, first, the ability to multiply in the tissues and to produce toxins harmful to some or all of the body tissues. The virulence of an infecting organism, depends on the ability to multiply, and produce toxins and upon resistance of the host.

Saprophytic bacteria, which are present in the different parts of the body, grow and multiply, but do not cause toxins enough to cause an infection. The body fluids, lymph glands and phagocytes are the resisting agencies which make an individual immune, at one time, though they may not be sufficiently protective at another, to the same infectious agent.

In the treatment of children's diseases, we have used, perhaps, more or less, the sera or vaccines for acne, typhoid, variola, pneumonia, erysipelas, furuncles, pertussis, gonorrhea, tuberculosis and diphtheria, etc., and so may make our deductions in these cases, as to their therapeutic value in each infection, and we may learn to use and make autogenous vaccines as well as stock vaccines.

In the study of childhood diseases, we do not lose sight of certain factors, not considered of the same value in adult diseases. First, the factor of heredity, for each child is a differentiated and enlarged germ-plasm, with qualities and defects inherited, and thus far passively impressed by maternal environment, but depending on its own individual strength.

Acquired characteristics are elementary, while the developmental factor becomes a powerful force, this being the great difference between adult and children's manifestation of disease. An example of this has been given in acute bronchitis, which attacks only the mucous membrane of adults, but in children, the entire tube, cartilage and all, is involved, increasing dangers of extension to lungs and bronchioles.

In children, the nervous development in early years, makes nerve inhibition weak, so that the child reacts, suddenly to stimulation. In children, acute conditions are much more common than chronic, and in adults the reverse is true. Childhood temperature therefore goes up and down, from slight variations and the pulse is not to be depended upon as an indicator, as in adults, of the organic condition of the heart.

In adults, the vasomotor impressions are checked, peripherally, and the symptom is a chill, but in a child, the vasomotor impressions undulate centrally, and convulsions may result.

The English pediatricist who said children's diseases were atypical, has many to disagree with him, if we interpret symptoms correctly. In children, the lymphoid tissue is present in far greater relative amount than in adults, and as proved by Bartel, the lymph glands have the power of inhibiting the growth and prolifer-

\*Read in Pediatric Section, Oklahoma State Medical Association, May 10, 1916.

ation of bacilli, especially of tubercle bacilli. The lymph vessels of the tonsils are efferent but not afferent, therefore we see why they are such a constant source of infection.

The number of *specific* infections and the special organism is continually increasing, but grouping of such is more accurate, and not so arbitrary as a few years since.

The exanthema: scarlet fever, measles, rubella, variola, varicella, erysipelas; and typhoid, cholera, tuberculosis, chorea, diphtheria, lagrippe, malaria, syphilis, pertussis, parotitis, meningitis, dysentery, rheumatism, osteomyelitis, poliomyelitis, tonsillitis and others, are common infections of childhood, all due to micro-organisms, not all specifically known now. Polluted atmosphere, water and food, may carry into the respiratory system colonies of micro-organisms, or into the intestinal canal such as will impair the structural integrity of the parts.

Wounds inflicted by the teeth of animals, weapons and toys, carry into the tissues micro-organisms, whose operations, local or general, may affect the system to its detriment. Unclean objects, spoons, knives, syringes and suctorial insects, are carriers. Fomites or objects made infectious through contact with individuals infected with small-pox, scarlatina, or other active infectious disease.

### The Avenues of Infection.

The skin should be a barrier to protect against invasion into deeper tissues, but after an abrasion the protection is gone, and the infecting organism finds its way into the tissues, surrounded by tissue lymph, which provides conditions appropriate for growth and multiplication of germs. The skin should, therefore, be kept in hygienic condition.

The successful invasion of the body by certain bacteria can be achieved, only when they enter it through appropriate avenues; though this is possible through several channels, there is usually a preferred route selected by the invading organisms.

The gonococci usually affect the genito-urinary mucous membranes, and they may affect the eye. Diphtheria usually selects the nose, pharynx, and larynx, but I have seen two cases of uterine diphtheria in adults.

Tuberculosis affecting the deeper layer of the skin we call lupus. Bacilli reaching the lymph nodes of the neck through the tonsils may remain localized, producing enlargement and softening of lymph nodes, passing through them reach the circulation and thus be carried to bones and joints, and occasioning chronic inflammation with necrosis and exfoliation of the diseased tissue.

The same bacilli may enter the intestine or being inhaled in the lungs cause the familiar pulmonary tuberculosis, with the germs of which, some writers claim 80 per cent of children are more or less infected.

In all these cases the type of infection depends largely upon the port of entry, through which the invading organism found its way into the tissues through the stream of blood, or the lymphatics.

McFarland tells us it is not always possible to explain why certain channels should seem so much more appropriate for infection than others, but lymph bathed mucous membranes seem good culture media for many germs to incubate. When introduced beneath the skin the germs are delayed in reaching the circulation and are in the meantime subjected to the action of the phagocytes; the systemic circulation is defended against such organisms as reach the veins by accident, or lesions in the abdominal viscera, by the interposition of the portal, capillary network of the liver, where the bacteria are caught and many of them destroyed, or passing through which, the next barrier is the pulmonary capillary system.

The deeper the bacteria invasion, the more active the defense, because of the blood furnishing the agglutins, bacteriolysins and phagocytes.

Perfect sanitation and environment offer best protection, and children whose

mucoid and lymphatic system are particularly active, owing to process of growth, and having an ever moist and active skin, are prone to have some of the bars of protection down for the invading army of germs at any time. (School inspection report.) Exposure to cold, poor diet, trauma, fatigue and other morbid conditions, are examples.

It is the duty of physicians towards children, especially, to establish all conditions possible to procure immunity in the child.

Active immunity should exist in every child. Domestic animals have a natural immunity to typhoid, chorea, measles, scarlatina, yellow and Malta fever, but animals and man alike may suffer from the plague, rabies, anthrax, tuberculosis, etc. Animals may have Texas fever, distemper, hog and chicken cholera, whose bacteria are not known to infect man, but if Burbank's proven theory of effect of environment on plants is as applicable to bacteria, the germs of the animals may be the same in hog and human cholera, but different because of environment, and our talk of "strains" and culture media proves this.

We say a child is usually immune against an attack of the same organism; though this is not always true, it may mean that "Immunity" shows that the body may receive the invaders but can not again do much harm. Acquired immunity may be through infections or intoxications. Sometimes the infection by which there is acquired immunity is not exactly similar to the disease against which it affords protection.

Quoting from Williams on Laboratory methods:

"All medical truths have not originated in medical schools or hospitals, and there is no reason, why a general practitioner should not have discovered the *Treponema pallidum*, just as a country doctor first discovered the tubercular germ. Scientific research is being carried on in which all pediatricists may take part in the investigations of: Acute poliomyelitis, pellagra, rabies, acute articular rheumatism, measles, mumps, variola, pertussis, colds," and when we have done some of this original work, the use of vaccines and sera will not be empirical, but backed up by our own positive knowledge. A compound microscope is, in my estimation, as necessary a part of office equipment, as a stethoscope or other useful instruments, and we are justified in using stock vaccines, if the clinical picture helps us in naming the infection.

Among the pathogenic molds that cause children's infections are those of *Trichophyton versicolor*, thrush and ringworm.

As pediatric clinicians, we know the best diagnosis of an infectious disease is the identification of the recognized etiological factor, and the port of entry. The medical profession has preferred to accept new methods of treatment sooner than new methods of diagnosis. With the increase of the number of diseases treated by particular therapeutic agents, specific diagnosis has become of importance and a necessity.

Under this treatment, we admit the sero therapy treatment of diphtheria, tetanus, rabies and of scarlet fever, for as to the latter, though Grabinchewsky claimed a few years ago, that he had produced a serum from the streptococcus, and proved it in hundreds of cases, it is only in the past few weeks that Doctor Mallory, of the Boston City Hospital, and Doctor Medlar, of Harvard, have discovered the long-sought-for bacillus of scarlet fever. The causative microbe being discovered, the making of an antitoxin to counteract the poison of the microbe, and then the making of a serum, to cause immunity, are the steps of progress.

The newly discovered bacilli are slightly smaller than those of Klebs-Loeffler, largest in the middle and taper to rounded ends. Early in the course of the disease, they appear both in small and large masses, in depressions of the tonsils and other parts of the throat and mouth, being most numerous on second day after the eruption, and multiplying with great rapidity until the third day. It is not easy to find them on account of dying, but they have already destroyed the epithelium and



left an easy access for other germs, as we so often find the Klebs-Loeffler and streptococcus accompanying the infection.

The discovery claims, on account of location and rapid death of germs, the period of quarantine will not continue through the desquamation, since the disease is not transmissible but for a few days after the eruption appears. It will teach the laity how to protect their children against passing from mouth to mouth, gum, pencils and candy, and should teach the physician in another convincing lesson as to the necessity of every child having a clear throat of adenoids and enlarged or infected tonsils, to make a smaller field and reduce virulence from numbers. It is all very well to refer the throat cases to the specialist, but in smaller places every general practitioner should know the technique and do this work, himself, wherever needed, and he should personally inspect every child's throat, no difference what disease or symptom is calling for treatment. Remembering that infections represent a large majority of the total of diseases, we recall the treatment of infections, in the past, has been through the various stages of vasomotor stimulants, and depressors, anti-septics, anti-microbics, mechanical, or relieving the pressure on the products of infection and thus limiting the destruction of the infective material through opening and drainage, but the injection of sera and vaccines is the latest, and now we depend largely on the latter when the specific organism is known, and oftentimes on mixed vaccines if not certain.

There is some discussion as to the relative values of sera and vaccines.

"A vaccine is a material that is injected into the body, made from specific organisms, to increase by its influence the anti-bodies, which that vaccine is believed to produce."

"A serum is the injection of anti-bodies into the system. It has been hard to work with vaccines because the stages of the disease, the activity of the disease, the tissues involved, and the individual resistance of the patient must control the dosage, therefore, no average dose can be agreed upon." As Murphy illustrates this in the administration of tuberculin, because with tuberculin we can give one person a thousand times the dose we give another, and the large dose be too small and the small dose too large to produce opsonic resistance to the tuberculosis.

Hospital reports show such excellent results on the use of mixed vaccines, where there is not a known specific organism, that we should not hesitate to use stock vaccines if not prepared to make autogenous vaccine. Asthma and arthritis show results not to be attained with any other therapeutic method.

The war in Europe has proved a large and successful field for vaccine therapy, but our strongest belief in these methods should not make us therapeutic nihilists, as to other remedies. (Pope)

The study of infectious diseases is so large that I can but touch on the general aspect, though we must not refrain from mentioning that tuberculosis as a sequel of measles, whooping cough and lagrippe, is not true, only as a pre-existing latent infection and the lymphatic activity are present with the pulmonary inflammation accompanying these diseases.

It is the purpose of this paper to urge a deeper study of biologic therapy, the principles underlying it, and to cooperate in all prophylactic measures, to reduce the infections of childhood, so many of which, leave the child with a life-long ailment, like tonsillitis, otitis media, arthritis, etc., if we are not able to come to the rescue with the right measures, at the right time.

## INFANT FEEDING.\*

M. B. SPRINGER, M. D., Tulsa, Okla.

It is only occasionally that a pediatrician is consulted about the feeding of a child by a prospective mother. The general practitioner is frequently asked: "What are we going to feed the baby?" To which he should make one answer: breast milk. He should do this in an emphatic manner so as to impress upon the mother that there is no other method of feeding. The weeks pass; baby comes, and makes its presence known by those little noises so peculiar to babies. Mother says it is hungry, and it is up to the physician to begin feeding the baby in earnest. One method is to give only boiled water the first twenty-four hours. This should prove satisfactory. After this time, the baby should not be fed oftener than every four hours. The mother should be told the reason of this, i. e., that it requires three (3) hours for the stomach to empty itself of one feeding of breast milk and it is necessary for the stomach to have some rest. If the physician takes the trouble to explain this and impress upon the mother how important it is for the baby to be regularly and properly fed, he will have no trouble in having his orders carried out. If it is a young mother, she should be made to feel the importance and responsibility of feeding her child. If this is done in the right manner, she will not be influenced by mother-in-laws and grand-mothers.

Now what are the troubles of an infant on breast milk? Correctly carried out there should be none. One of the most frequent complaints is colic, so-called. There will be no colic if the baby is fed at four (4) hour intervals. The trouble is, it is fed at shorter intervals and too much at a time. Another complaint is that the baby vomits. This is generally a simple regurgitation due to giving the baby too much milk at one time and the remedy is obvious. We must not overlook the fact that the baby may not be receiving a sufficient amount of milk. It is impossible to regulate this by fixing an average time for the length of the nursing period. The best method is to weigh the baby before and after feeding, determining the amount of milk that the baby takes from the breast in a given time. A German feeding scales has proven most useful with me in this connection. There is a scales made by the Fairbanks Company graduated in one-fourth ounces, which serves the purpose. Physicians will find that the employment of one of these scales will not only aid in the correct feeding of infants, but will help hold their infant practice by the impression made upon the mothers.

If it is found that the baby is receiving more milk than the capacity of its stomach, its nursing period may be shortened and it should be remembered that the majority of the milk is taken from the breast in the first five minutes. But suppose that we find that the milk is deficient; what then? It is possible to increase the liquid content of the milk by increasing the fluid intake of the mother. I doubt, however, whether the solid contents of the milk can be effected. The plan that I follow in these cases of insufficient milk is to have the baby nurse from the breast at each feeding, and then substitute a suitable milk dilution. We think that it is best to supplement each insufficient feeding rather than to omit feeding at the breast and give an entire feeding of artificial milk dilution.

Under no circumstances should a baby be taken from the breast if it is receiving any breast milk at all. Many physicians remove a baby from the breast without a sufficient cause. There is no milk dilution that can equal the poorest mother's milk. If a physician is having trouble with a baby on breast feeding, he should look for a cause of his difficulty in the baby itself, rather than in the mother's milk. In my limited experience, I have never found a case in which I thought I was justified in removing a baby from the breast. Now, under what conditions should a baby be taken from the breast? For some serious constitutional disease of the mother, tuberculosis being the common one. Even if a mother was suffering with an acute infectious disease, I would be guided in removing the baby from the breast

---

\*Read in Pediatric Section, Oklahoma State Medical Association, May 10, 1916.

by the circumstances in each individual case. Given intelligent nursing, and with the mother not too sick, I believe that it is possible to keep the baby at the breast in any acute illness, including an infectious disease.

Recently we had two cases of typhoid fever in the mother and the babies were nursed through the entire period showing normal gain of weight at the end of the mother's illness. With ordinary care on the part of the physician and the mother, there should be no great cause for trouble in the feeding of her breast-fed baby.

Now as to artificial feeding, in either of those cases in which it is absolutely impossible to have breast feeding from the start or in those cases on which you are called when the baby is already started on artificial feeding, I believe the simpler the methods of artificial feeding employed, the better will be the result. The average mother will be confused by complicated feeding rules, and the average physician has not the time to carry out the difficult methods. The two methods in general use in artificial feeding are the so-called percentage method and the simple milk dilution. I have had no experience with the percentage method, but have found simple milk dilution methods to work very well. In this method there are but few simple rules necessary. We should remember the capacity of the baby's stomach at the age given, at the age of the patient, the milk dilution for the average case at that age, the caloric requirement of the infant, and the caloric value of milk, cereal water, etc.

The first three months the capacity of the baby's stomach is up to two ounces, three to six months, six ounces, one year about nine ounces. These will serve all practical purposes. The milk dilution for the first three months approximately one and four; two to three months, one in two; third three months three parts in four; and at the end of nine to twelve months straight milk. Again, it must be remembered that these figures are only approximates and that the milk content must vary with the individual case. It should be remembered that the normal infant requires about forty-five (45) calories of food to the pound weight in twenty-four hours. Knowing that there is about seventy (70) calories in three and one-third ounces of average milk, twenty (20) calories in the same amount of oatmeal water, five (5) calories, teaspoonful cane sugar, it is easy to estimate whether or not the baby is receiving a sufficient amount of nourishment. This method is not an exact method for each individual infant, but acts merely as a check. Again we will say, each infant is a case unto itself. This method is valuable because of the fact it is so easy to increase or decrease the amount of food to meet the individual requirements of the infant. If one wishes in an individual case, he may also employ different parts of bottle milk, of which use top milk, whole milk, skimmed milk.

Now, what are the difficulties with the average case of artificial feeding? The simplest one is the regurgitation or curded milk with a sour odor. This is generally due to an excess of sugar. If the baby vomits at intervals, or constantly has constipation or diarrhea, the food, as a whole, is too strong. Green undigested stools in which particles of fat may be seen, indicate fat excess. Casein contents of milk, however, offer the most difficulties. Recognized presence of curds and by ruling out trouble from the other constituents of milk this difficulty is better overcome by the use of alkalies, the latter giving another curd. It is here that whey feeding is valuable.

Cereal gruels are of value as a diluent for two reasons: they add caloric value and are of an aid in constipation. We should correct the idea prevalent among the laity that oatmeal water causes diarrhea, while barley water prevents it. The cereal obtained from these two is identical in action. The sugar best suited for infant feeding, is destrose maltose. It may be given up to seven per cent depending upon the stool. Loose stools with increase in frequency calling for a diminution in the sugar content.

Feeding a baby with condensed milk is a popular method among the laity. I have had but limited experience with this method of feeding. I do not believe it should be wholly ignored. It is my method when called to take care of a case which



has been fed by condensed milk to correct the strength of milk and its quantity, if possible, and continue the same method. Failing in this, and if the patient is not too sick, I generally adopt cow's milk dilution. The great trouble with condensed milk is the excess of sugar. It is a forced feeding, which for some reason gives the child little resistance in acute illnesses.

For the graver conditions of infant troubles, one should adopt a definite classification, the one simple classification is that of Fincklestein. This classification is easy of adoption and the cases easily fall into one of the divisions, giving you a working basis. He divides them into weight disturbances, dyspepsia, decomposition and intoxication. Weight disturbances of distress in the infant caused by a relatively high fat content in the food, and clinically characterized by constipation, weight decreased, ammonia output in the urine, pallor, fretfulness and disturbed sleep. Artificially fed infants are almost exclusively affected and it is these cases that show signs of exudative diathesis. Two common symptoms, fretfulness and constipation, hard and dry stools. The child with flabby skin, pale color, intertrigo and eczema. Treatment is to reduce the fat by using skimmed milk, malt-sugar being the best carbohydrate. Employ a cereal water as a diluent, fresh air is necessary, avoid drugs if possible.

The second condition, dyspepsia, is due to over-feeding one or many of the food constituents. Characterized by vomiting, diarrhea, and a rise of temperature. It is a disease of the summer months and occurs in infants with poor surroundings; generally caused by an excess of sugar, sometimes excess feedings. Symptom: vomiting, diarrhea, formation of gas, sub-febrile temperature. The curd occurring in the stools are not the hard bean-like curds, but small balls of mucous and small parts of fat. The best treatment is reduction of the food, or giving entirely a cereal water for twenty-four hours, and then start with a small amount of skimmed milk. Grulee recommends one ounce to the pound weight in twenty-four hours. This is increased as rapidly as can be borne by the patient, until the normal quantity is reached. Breast is often here of distinct advantage.

The third stage, decomposition, offers more difficulty. It is characterized by an inability to assimilate food and gain weight properly. Sub-normal temperature and lowered resistance due to gross errors in diet. Sugar being largely at fault. These cases have no particular symptom, but once seen are always recognized. They are emaciated and hungry, but cannot take food. Skin has a bluish, transparent appearance. Temperature is sub-normal. These are the cases that are brought to the hospital dispensaries in a practically dying condition. Perhaps the first thing necessary in a case of this kind is stimulation. This is best accomplished by the use of saline injected sub-cutaneously. Best location for this is in the abdominal wall. Champhor oil, given hypodermically, is a good heart stimulant. Brandy may also be given in small injected doses. In these cases, breast milk gives the best chance for recovery. It may be necessary to give the breast milk with a medicine dropper, beginning with 4 to 5 cc.'s every two hours and increase as condition warrants. In the absence of breast milk, we have had the best results with casein milk. This, of course, is best prepared by laboratory. In the absence of laboratory, I have found that commercially prepared lerosan to be of value. In my own cases, however, I endeavor to get breast milk and I have found that this is not as hard to get as may appear. The humane agents, detention homes, advertisements in the local papers, will generally give you a choice of wet nurses.

The last classification of these cases are those of intoxication, characterized by a sudden collapse, high fever, diarrhea, vomiting, temperature, pauseless breathing, leukocytosis and lactosuria being present. It generally occurs in summer months, but also in the winter months. Usually all of these are diseases of artificially fed babies. The high fever distinguishes it from decomposition. Diarrhea is generally always present. It must be distinguished from dyspepsia, which has the same symptoms, but of a slighter degree. Treatment: Stop food and supply water, both by mouth and sub-cutaneously. Again, breast milk is the best; casein, the

second best and then skimmed milk or buttermilk. Fever is controlled by hydrotherapeutic methods, including rectal enemas. In all of these cases vomiting may be overcome by lavage. Baby refusing feeding, can do so after being fed once or twice by lavages. This is best accomplished by catijer and a small funnel.

In summarizing, I wish to state that the one food for infants is breast feeding. Every effort should be made to keep the child upon the breast. If artificial feeding is necessary, the simplest methods should be employed. In the abnormal conditions, resulting from artificial feeding, that of breast milk in the proper amounts and at the proper intervals, offers the best chance for recovery. The next best is casein milk, lerosan being of an aid in preparing this. That in grave cases of intoxication and decomposition, breast milk, stimulate with camphor oil, and then give a large amount of water by saline, sub-cutaneously.

### ARTIFICIAL FEEDING OF NORMAL INFANTS.\*

C. V. RICE, M. D., Muskogee, Okla.

One-fourth of the deaths occur in the first year of life and sixty per cent of these die of gastro-intestinal conditions due to impure milk and improper feeding.

Dr. Abt stated when he was interne in Cook County Hospital, during the hot summer nights that the infants would die off like poisoned rats, due to the impure milk supply and their method of feeding at that time.

The artificial food for the infant should be cow's milk. There is not a single patent food nor condensed milk which can replace fresh cow's milk. No artificial food, although it may contain the same proportion of the different food elements, is the same as human milk. It is often said that a baby has an idiosyncrasy for cow's milk. Dr. Jesse Gerstley, who spent two years in Finklestein's clinics and has charge of one of the children's welfare stations at Chicago, and sees about fifty feeders every afternoon, says he has never seen such a case.

Most of these conditions are not due to the cow's milk, but the modification. Morse & Talbot say in these cases the troubles are probably manifestations of an anaphylaxis of the proteins of cow's milk, and that a greater number of these babies have been fed on cow's milk the first few days of life when there was an abnormal condition of the intestine and the foreign protein of cow's milk was absorbed and this produced the sensitization.

We are told that the infant handles the cow's protein as well as the human protein. So we need not worry about the protein as a source of evil, as long as the baby is getting sufficient amount to replace the nitrogenous waste of the body.

New tissue is not formed from carbohydrates nor fats. So it is necessary that we make sure that we are giving enough protein for new cell formations and the growth of the body.

Mother's milk contains one and a half per cent protein. Cow's milk contains three and a half per cent. Allen says that in twenty-four hours it requires the amount of protein contained in one ounce of whole milk to the pound weight. Grulee uses one and one-half ounces to the pound weight, and says by so doing he not only supplies tissue waste but enough to supply the growth of the organism.

The cause of delay in muscular development, anemia and functional derangement of the nervous system is often due to a deficiency of the protein. Mother's milk contains seven per cent sugar; cow's milk, four and a half per cent. Some men claim that cane sugar is handled just as well by the infant as the milk sugar, and the latter often causes a diarrhoea, and sugar fever.

For the last two years I have been using the Dextrin-Maltose and my feeders have been handling it with the greatest of satisfaction.

Morse & Talbot say good results may be obtained by the polycarbohydrate

\*Read before Muskogee County Medical Society, October 9, 1916.

feeding. That is, several of the sugars, including a starch, may be given. As there is a difference in the absorption of the various sugars, more at a time can be given without overtaxing the power of the organism.

The human fat and cow's fat are the same in percentage. The amount used in infant feeding may be varied. Grulee says the amount in one and a half ounces of whole milk to the pound weight, is sufficient. One may use two ounces to the pound weight, but that depends on the age and condition of the baby. We are apt to use too high percentage of fat in infant feeding, as we are anxious for the infant to gain in weight. And then we might think that fat always has a laxative action, when to the contrary, an excessive amount is the common cause of constipation.

There has been some question in regard to boiled milk, and why the Germans advocate its use and the Americans on a whole, do not. Dr. Joseph Brennaman, of Chicago, associate professor of diseases of children at the Northwestern Medical School, decided he would do a little experimental work with boiled milk and note the results. He first found a very accommodating man that could vomit at command, with very little effort. He gave him different quantities of raw milk, also raw milk that had been treated by the addition of milk of magnesia, sodium-citrate, sodium-bicarbonate and lime water. He did likewise with boiled milk, allowing the different milk preparation to remain in the stomach from one-half hour up to stomach digestion. He then collected the different curds and hardened them with formalin solution. At the Pediatric Congress, held at Chicago two years ago, Dr. Brennaman gave a demonstration of his curd formation in the different modification of milk. And it was very surprising, indeed, as to the size of raw milk curd. On the other hand, the milk that had been treated by boiling, the curds were small and very well divided. The milk that had been treated with alkalines were very well divided also.

It is true boiled milk is somewhat constipating, but that is more of a bug-bear to the mother than it is to the infant. When we consider twenty-nine per cent of tuberculosis in children is due to the alimentary route of infection, acute infective diarrhoea, scarlet fever, typhoid, and diphtheria may be conveyed by raw milk, I think we are justified in using boiled milk for infant feeding at all times. As the bad results which, perhaps, are nothing more than constipation and scurvy, are overbalanced by the many good properties of boiled milk.

I have been using simple dilution method of infant feeding. This method was started by the Germans and I find it is being used by the infant hospitals and men who are following Finklestein's teaching. This method is supposed to do away with the percentage calculation. But I think, even if you do use this method, one should figure in percentage and calories just the same. You use your calories in checking up a sufficient amount of food stuff to the pound weight of the infant. The following plan for strength of mixtures is applicable to most infants, and is the plan used at the Sarah Morse Hospital, Chicago, and one very similar is used at the Babies Dispensary and Hospital, Cleveland.

First and second week of life: One-third milk, plus two-thirds water, plus three per cent sugar, and which has a caloric value of ten and six-tenths per ounce.

Second month: One-half milk, plus one-half water, plus five per cent sugar, and which has a caloric value of sixteen and five-tenths per ounce.

Three to six months: Two-thirds milk, plus one-third water, plus five per cent sugar, and which has a caloric value of twenty per ounce.

Six to nine months: Three-fourths milk, plus one-fourth water, plus five per cent sugar, and which has a caloric value of twenty-one and seven-tenths per ounce.

Nine months and later: Whole milk, and five per cent sugar, and which has a caloric value of twenty-seven per ounce.

The average normal child, after the fifth month, should be given one and a half ounces of milk to the pound weight, exclusive of the sugar and starch added. And infants under five months, with the exception of the first few weeks of life,



may require two ounces of milk per pound weight. Premature and under-fed infants may require three ounces to the pound weight for a satisfactory gain. Example of feeding a normal baby five months old, weighing fifteen pounds—Milk mixture strength: Two-thirds milk, plus five per cent sugar, caloric value twenty per ounce. Milk twenty-two ounces, water eleven ounces, sugar five per cent. Total of mixture, thirty-three ounces. Five feedings and a little over six ounces at a feeding.

A baby this age and weight requires six hundred and seventy-five calories, or forty-five calories to the pound weight in twenty-four hours. In this example, the infant is getting 660 calories in the twenty-four hours, or, forty calories to the pound weight, which is practically alright. As early as the fourth month, I start feeding a mixed diet. First, one or two teaspoonsful of orange juice daily; at six months, a broth and vegetable meal in the form of a meat soup; ninth month, vegetable soup, chicken, lamb or veal broth with toasted crumbs. Stewed fruit, apples or prunes, vegetables, strained spinach, carrots and turnips. The broth is given in the same quantity as the bottle, or less if the fruit or vegetable is given in addition.

Infant feeding represents the heaviest responsibility that devolves upon the pediatrician, or the general practitioner of medicine, as there is nothing we can do to make it easy. Infant feeding is the hardest problem that we have to encounter, and those who want to make it easy had better resign the problem to those who are willing to take every trouble required to find the best possible food.

References: Grulee, Morse & Talbot, Still and Archives of Pediatrics, September number, 1916

### GRIP.

The epidemic of grip occurring over the United States last winter has been studied by J. A. Capps and A. M. Moody, Chicago (*Journal A. M. A.*, Nov. 4, 1916) who finds that few of the large cities escaped. Statistics of morbidity are meager. Of 677 persons in four hospitals in Chicago, 21 per cent. were confined to bed for one or more days. The epidemic began early in December and by the latter part of January had nearly spent its course. The course of the epidemic reminded one of the great grip epidemic of 1899-1890 and this was strengthened by the unusual prostration lasting days or even weeks after mild attacks. The numerous epidemics of septic sore throat have all been different in their symptoms and restricted to certain localities. Leukocytosis was studied in fifty-three cases. In thirty there was a count of 10,000 or less; in sixteen cases from 10,000 to 15,000, and in seven cases, 15,000 or more. There was an unusual prevalence of pneumonia in the larger cities, and according to Mathers, a large proportion of the pneumonia cases in Chicago were of the bronchial, such as was known to have occurred so often in the great pandemic of 1899-1890. The bacteriologists have not been able to determine any one factor. From a cultural standpoint the streptococcus deserves more serious consideration as the causative organism than the influenza bacillus. The possibility of some ultra-microscopic germ is suggested by certain investigators. It is interesting that the two organisms most constantly described in the pandemic were the streptococcus and pneumococcus. The influenza bacillus was only discovered later. The commonly accepted theory that it is spread by direct contact seems contradicted by the freedom from the disease of the inmates of large institutions, prisons and hospitals, where it was prevalent among the attendants, employees, and visitors. A similar relative immunity was commented on in two large hospitals in Chicago. There is need of more field work by competent investigators in regard to such grip epidemics. We have not developed facts of sufficient defensive value. Epidemics cannot be properly studied in hospitals alone, and the laboratory workers must go out into the community and obtain their material for study. The splendid field work that has been done by the United States Public Health Service shows us how, by proper extension, we can hope finally to determine the cause and discover the means of prevention of grip epidemics.

## IMPROVEMENT OF RACE AND NATIONAL VITALITY.

M. A. WARHURST, M. D., Sylvian, Okla.

Disease is not an inevitable factor of man, it is an acquired evil resulting often from the formation of people into groups and their congested form and unsanitary mode of living, combined with ignorance of nature's law and an inherited, deficient, vitality transmitted through innumerable generations. When we study the nature of disease and its powerful influence over the race, it is no wonder that habits of slothfulness have formed and the laws of nature are violated continually, by men of all stages of civilization—indeed it seems almost a miracle that mankind has retained the degree of vitality which he maintains today, considering the rough highway over which he has passed. The great task before us is to overcome the inertia of the many years of ignorance and wrong living, and teach the lesson of individual responsibility. Physicians no longer consider the subject of hygiene and sanitation as one to be relegated to the few, they are especially interested in scattering the important information that sanitation is one of the firm principles upon which the race must rely. If strength and vitality is increased; the food must be free from defects, the water supplies must be protected and free from pollution and all noxious insects, rodents, and other disease carrying agencies must be destroyed; high sanitary methods are advocated instead of dense living, as now usually practiced. All true physicians never lose an opportunity to speak out for protective measures for the human family, and strive to arouse the ignorant and careless from their lethargy and teach them to regard the laws of health, as their sacred duty to themselves and the race. With our present knowledge of sanitation we feel that many economic and social changes are coming to the race and that many more wonderful changes unthought of today will come with the thought of the morrow, and that the principle feature operating under all these changes will seem to be that most marvelous of all forces known to man—the law of love and duty. Just as the primitive man developed so as to include his mate, then his offspring, then his family, then his tribe, then his nation, then all kindred, speech and beliefs, then constantly broadening the circle according to his development, so will be the man of tomorrow, just as other natural forces have been raised from the category of superstition and base credulity that are now mastered and used in the service of the race, so will the great forces of the mind be raised from the category of superstition and absurd theories and being understood by science, *will be used intelligently* for the upbuilding and strengthening of humanity. We may err in the details of what the morrow may bring forth, but we feel certain of many changed conditions which will result in a stronger and healthier race in the future. The storehouse of nature contains unborn good beyond our wildest dreams and anticipations. The very highest hopes and aspirations of the race are but prophesy of their ultimate fulfillment and realization. Eugenic students recognize clearly that the race can and should be improved, mentally morally and physically. It is an evident fact that upon each generation rests the responsibility of the succeeding generation; this responsibility we cannot escape. We have reached the point in the evolution of man where it can be plainly seen that just as we have acquired supreme command over a few of the great forces of nature, and have been able to apply them to our purpose, so may we assist the great life forces and turn them into channels that will enhance, prolong and beautify humanity. Do not understand me to say that we can change nature's laws, for we know that these laws are unchangeable, but we intend to convey that man should work in harmony with these laws instead of antagonizing many of them, as is now the custom. We cannot emphasize the fact too strong, that the law of heredity applies equally to man as to the lower animals, and plants, and that the mental functions of man bear the same relation to heredity as the physical has not been seriously thought of by the public, when the public in general is fully aware of its duty when it recognizes the real danger and the means whereby the race may be improved, when it sees that

\*Read in Pediatric Section, Oklahoma State Medical Association, May 10, 1916.

the health and happiness depend largely on the selection of marriage mates, then will more care be made in the selection. Parents occupy one of the highest and most responsible positions connected with the racial question, and should exercise their marriage selection as a service for generations in the future, the loftiest privilege allotted to man, not the sentiment of parenthood which only regards the child and grand-child, but considers the generations for ages to come. Only by constantly selecting the best can the race be materially improved. By the selection of the most perfect types of our race in marriage, combined with education, sanitation and favorable environment, improvement in the race is limitless. If this process should be continued we anticipate a new and cheerful human race sometime in the future, free from disease and degeneracy, the hospitals will be a relic of the past, prisons, insane asylums will no longer be needed, charitable institutions will no longer exist, and the glorious epoch will have arrived as a crowning result of human achievement by man's adherence to a biologic law. Parenthood to the insane, alcoholic, epileptic, syphilitic, degenerate, and criminal, should be denounced as a crime against the future of the race. The race demands better heredity, and improved environment, the mothers need better protection from the conditions which affect the children born to them, necessity demands the protection of the child from environments which are detrimental to its normal development. Present conditions favor the birth of numerous unfit children, and further permits practical slaughter of thousands of desirable ones, owing chiefly to imperfectly educated mothers, defective environment, and unscientific nutrition. Why not breed a stronger and healthier race, and carefully guard and protect the children that are born rather than let conditions continue as they are with a corresponding waste of children, accompanied with the response to demand more children? Our motto is: produce the best children possible, and then take the best care of them.

Is it true that we are committing race suicide? Certainly, but not because of low birth rate, but from the fact that unscientific mating is allowed, and from the careless way that babies are nurtured and cared for. To those who say that the subject of eugenics is a visionary dream, and its realization impossible, vision or no vision, the tide is turning decidedly in this direction and at no distant day we will be regarded as little above barbarians, in stage of development along this particular line. We will present a strange spectacle of a past generation, who were interested in the scientific breeding of plants and animals, giving them the strictest attention permitting the propagation and raising of the human race, to proceed in defiance of nature's law while we possessed a clear understanding of this law. The Japanese are quietly using many eugenic suggestions for the improvement of their race, looking forward to the propagation of a race sound in body and mind, which will inevitably bring this nation to the front and place it among the great powers of the world should they adhere to these principles. It requires but very little study of these principles to realize what an advantage any nation would have should the eugenic principles be strictly complied with. If the same attention were given to the improvement of humanity that is given to plants and animals, in a few years we would have a superior and ideal race, with human qualities devoted to a high degree. More children are not required for this purpose, only children with stronger vitality, better environment, well nourished, better reared and scientifically educated. We have sufficient material, improve the product, and save the state expense in caring for its criminal institutions. Educate the people to the point where they can see that it is really a crime against humanity to bring unfit children into the world. When the public grasps this fact and it is made plain to them, then will the work begin in reality. When the young and the old thoroughly understand and realize the fact that the racial instinct is concerned with the subject of propagation, and parenthood, instead of the gratification of the animal passion, then will come to the race a nobler and higher aim. With new ideals will come the demand, immediately following will be the response, for more and better protection of woman from long hours of labor and strenuous tasks, for which by nature she



was not intended. The pregnant woman should be considered a sacred charge of the state, demanding its protection and considerate attention, the infant should be regarded as the chief asset and be provided with the best environment, and education, or at least give it the same attention that is devoted to blooded stock. We learn from the history of the past that wasteful conquests have robbed many nations of their strongest, most vigorous and powerful men, leaving the propagation of the race to the weak and unfit, then the nation's brilliancy, power and culture begins to wane. The excessive and immoral habits which follow, sow the seeds of decay and degeneration, and the most successful nations become powerless, weaken and fade away, while other nations more strong and powerful become their master. Mortality was once believed to be an unyielding law, while the facts are mortality varies in every country and clime; where hygienic surroundings are improved, mortality decreases. It is possible by closely observing and complying with the laws of hygiene and sanitation, to banish all contagious diseases from the human family. It is a notable fact that the death rate of the black race exceeds the rate for the white, this difference doubtless being due largely to the manner of living and sanitary surroundings. If the standard of living for the black race were as high as the white race, it is my opinion that very little, if any, difference would exist in the death rate, from the fact that those either white or black who are properly fed and clothed, with surroundings neat and clean, are less susceptible to disease than those who are poverty stricken, overworked and ill fed. The improvements of heredity will only benefit future generations, while we of the present generation must take heredity as we find it and through hygiene and sanitation overcome much of our inherited qualities, especially those relating to the physical being; we can obtain a large reward with slight effort by pursuing the method of hygiene.

Just as long as the natural law of propagation is ignored, the human family will be compelled to contend with conditions caused by weak and defective humanity. There is no higher achievement in life than the endeavor to create a race on improved principles. A large majority of mankind are at present living in total ignorance of themselves. The major portion of the world live in their instincts, as do the animals, but without the restraint that holds the animal to due observance of the natural law of his being which prevents him making the miserable failure in modes of propagation and living which man, with all his boasted reason, action and freedom, is ever repeating. But very few people consider this matter in its true light.

Usually when the subject is approached, it is passed by without serious thought. As long as people with weakened minds, diseased bodies and whose ancestors were insane, consumptive or nervous or had criminal tendencies, are allowed to marry and propagate their kind, so long will the human race continue defective, immoral and weak. Nature has provided us with a law whereby the race may be made strong and healthy, morally, mentally and physically, and in the face of this fact men continue to willfully and ignorantly violate this one of the grandest laws with which nature has provided for mankind. If health, strength and purity of the race is desired, we can not dodge this great issue. Is this all that is required? No; we must eat, drink, sleep, labor, in accordance with hygienic laws. If we desire noble and manly offspring, we must build on improved methods, taking the natural law of evolution as our guide, and ignore the animal-like system of propagation which at the present time is practiced among the civilized races of the world, as well as the uncivilized, and herein is a most facetious parallel between those who consider themselves highly civilized, and the lowest type of the human race in existence; they both perpetuate the race upon the same plane of animal instinct or lust. Civilized man, with all his boasted reason and high development, has not lifted himself one degree above the very lowest form of humanity, when the theory of propagation is considered. When the consideration of propagation of domestic animals demands man's care and attention, then he uses his scientific reason and culture to bring about a better and higher grade animal than its ancestors. To

improve animals by design and law, appears to him the right method, but the propagation and rearing of his offspring he usually leaves to chance, to lust and ignorance. Is it a wonder, in the face of these facts, that our taxpayers are burdened with taxes, to maintain the poor unfortunate class of humanity, who had no voice in deciding their parentage and environment, from this source our prisons, asylums and our houses of correction, and criminal institutions of every class which receive the greater part of inmates? Our stables, dairies, poultry yards and kennels, shine in comparison. From the fact that reason, education and the natural law of evolution are contributors in the latter case in the improvement of the species, and in the former ignorance, vice, neglect, animality and defiance, have filled every community with criminal, defective, sickly beings, who stand as a frightful monument exposing man's disobedience and ignorance.

### GAS INFECTION.

GEO. D. McLEAN, M. D., Oklahoma City, Okla.

Based on an experience of several months' service in France attached to the Royal Army Medical Corp, the following conditions have appeared uppermost in handling of septic or infected wounds, particularly of the gunshot varieties.

Practically all the shrapnel wounds are infected, either by having introduced part of the clothing or dirty skin into the wound. A few of the direct rifle wounds escape infection, but not a great percentage. In these wounds are found besides the usual streptococcus and staphylococcus, the colon bacillus and often *Aerogene's* capsulatus, or Welsh's bacillus. Sometimes called the bacillus of malignant oedema. Many times a shrapnel, either fragments of casing or ball, removed and cultivated, show strong cultures of this last named bacillus; the wound having been in a well supplied area and kept thoroughly drained, the patient shows no untoward reaction. In one or two instances, falling under my personal observation, fragments removed from the brain showed this culture, but the patient showed an uneventful recovery.

However, in a majority of cases, the infection of gas bacillus is a very grave condition. The sudden onset of high temperature, weak rapid pulse and deep toxic reaction becomes a familiar sight.

Wide open drainage attempting to induce all the lymph-return from the infected extremity to be induced into some opening and exposed thereby to the air, or if dressed to chlorine gas is the only salvation. This infection seems to have a predilection for arterial sheaths, and to destroy the artery both as to wall and intima, so that once it gets along a main trunk supply in an extremity, the chances for saving that extremity become quite small. This has often occurred where an ascending gas infection occurred in the lower leg, attacking in the popliteal region.

A large blister soon occurs on the posterior aspect of the ankle. In some cases filled partly with a dark sanguinous fluid and a great deal of gas, the fluid showing quite plainly. The usual case, however, is marked by crepitation upon pressure, greatly swollen part and high fever, weak rapid pulse and the general picture of deep toxæmia.

There is a peculiar odor to these patients which soon becomes a recognizable symptom or an alarm. The infection will seek the lymph spaces, dissecting along fascias, above and below and between muscles sheaths, and even between the fibres of the long muscles. The drainage, therefore, requires the wide splitting of fascias, deep incising of muscles and apparent butchery.

These wounds generally exude large quantities of pus through which the bubbles of gas may be observed, rising quite frequently and freely. To keep this out and allow absolutely free access of oxygen, should kill this infection, but the very thinnest membrane of dried or even fluid pus will act as a shield against the ingress of oxygen. The practice of keeping irrigations up with either peroxide of hydrogen or eusol, was very much in vogue for a long time. In my own work these give

way to moist packs. The use of hot boric acid packs were quite freely used, and with good results in many cases. The idea being to induce all the serum possible to flow toward the open cut and be taken up and out of the system.

After a lot of experimenting, I found that the eusol mixed with glycerin would stay moist and take up in the gauze thus impregnated about all the pus produced by a wound, thus leaving the tissue clean of all external pus. Then the nascent cholrine in this dressing penetrates deeply into the exposed tissue, killing any bacteria with which it comes in contact. The additional advantage of this glycerine addition is that it greatly increases the capillarity of the gauze and thereby actually drains the lymph from the wound, creating an outflow and leaving the bacteria less opportunity to propagate or do damage to exposed tissue.

This dressing, to be most successful, should be backed up with good absorbing cotton and protected from atmospheric moisture; thereby utilizing all the hygroscopic power of the glycerine and moist gauze upon the wound surface. This also conserves the heat of the wound and keeps the temperature of the wound uniform, thus protecting wound above the coagulation point of the serum, eliminating to an extent the necessity of the hot packs which require so much care and work on the part of the nurse and fatigue on the part of the patient. The other dressing being good for twelve to twenty-four hours, allowing ample time for rest, sleep and recuperation of strength.

Please do not understand that this dressing absolutely insures success, nor eliminates the necessity for the greatest of care as to incision and often amputation to save the rest of the patient. For one who has dealt with gas bacillus never feels really safe so long as there is any fever, odemea or pus to be found, as one little pocket or run-in between muscles or tendon sheaths, may relight an almost extinguished conflagration. One feels like treating this disease to all the deaths possible and then a few extra.

Immobilization of affected limbs should be followed as nearly as possible, even in the absence of fracture, in order to prevent the ingress into the tendon sheaths of any of the infective material.

To recapitulate in treatment of gas infection:

1. Open freely and between trunk and infected area.
2. Never allow a dry film in that wound.
3. Dress with sufficient frequency to keep out all storage of pus.
4. Protect to conserve heat.
5. Immobilize.

### PYORRHEA.

H. E. Potter, Chicago (*Journal A. M. A.*, Feb. 10, 1917), says that roentgenography in pyorrhea alveolaris does not differ in its technical plan from that used in other procedures intended to shed light on diseases in the jawbones. The constant feature of the disease making this possible is the ulceration in the presenting margins of the alveolar processes and the more intimate bone about the roots. No such rigid technic is necessary in pyorrhea as in the demonstration of periapical disease, in which foci of minor decalcifications must be detected. But in any pyorrhea case some of the changes about the roots showing deeper encroachment are important and the most critical roentgenography is required. Potter gives the appearances that must be looked for. Whether the line limiting the ulcerated process can be followed or not, it will usually show plainly in the region of the septal bone. There are limitations to the value of the Roentgen ray which are also mentioned, and a very important point in the diagnosis may be entirely undemonstrable, namely, the activity of the disease at the time of examination. A general survey of the denture by a series of dental films is an important adjunct of a pyorrhea case, and often a short cut to a diagnosis, but should supplement rather than displace other diagnostic methods. The most important diagnostic points are seen in the region of the intimate bony investments of the roots and are obtainable only from the most critical roentgenograms.



## PROCEEDINGS OF ST. ANTHONY'S CLINICAL SOCIETY.

January 25, 1917.

DR. D. D. McHENRY, Pres. DR. L. J. MOORMAN, Secy.

## THE PRINCIPLES OF THE COMPLEMENT FIXATION TEST.\*

By O. J. WALKER, B. S., M. D., Oklahoma City, Okla.

The complement-fixation test as a diagnostic method is not a new phenomenon, although it has come into use as a practical clinical method comparatively recently. Today it is rapidly becoming one of our most useful and most widely utilized diagnostic methods.

As early as 1886 investigations had been made which showed that normal blood serum possessed the power of killing certain pathogenic bacteria. It was shown that if a guinea pig is immunized with living or dead bacteria, for instance, typhoid or cholera, by repeated injection of doses too small to kill it; and then injected with a single fatal dose, or many times a fatal dose of living bacteria, the animal remains alive; whereas, a normal control animal, not immunized before hand, succumbs to a similar inoculation.

In order to determine the forces to which the immunized animal owes its protection, Pfeiffer in 1894, undertook the following classical experiment: two guinea pigs, one immunized and another normal, were simultaneously injected intraperitoneally with living cholera vibrios and the peritoneal exudate was withdrawn from time to time and examined microscopically in hanging drop preparations. A very striking phenomenon occurred. While the cholera vibrios in the peritoneal exudate of the animal retained their form and motility and increased in number continuously until the animal succumbed to the infection; the bacteria in the peritoneal exudate of the immunized animal behaved quite differently. They first began to lose their power of locomotion, then their form changed, they broke up into even, small, shining masses, and finally after several minutes these masses disappeared entirely. Guinea pigs injected with this peritoneal exudate remained healthy and nutrient media inoculated with material from the same source remained sterile.

This phenomenon was named bacteriolysis and was found to be a strictly specific process. An animal immunized against one bacteria, cholera for instance, would quickly succumb to a fatal dose of any other pathogenic organism, as typhoid.

Similarly it has been shown that when any foreign material is introduced into an animal it stimulates the production in that animal's blood serum, of certain substances which have the power to destroy the material injected; and these immune bodies, called lysins or cytolytins are specific for the material that caused their production.

An animal that is injected with red blood cells of a different species develops in its serum anti-bodies which are biologically analogous to bacteriolysins and differ from them only in that they cause disintegration of erythrocytes instead of bacteria. These anti-bodies are therefore called hemolysins and the breaking up of the red blood corpuscles, hemolysis, is recognized with the naked eye. The hemoglobin passes from the erythrocyte into the surrounding fluid and colors it red. The previously opaque blood breaks and becomes transparent.

While bacteriolysis, or hemolysis, was readily produced in vivo (within the animal body) by mixing living bacteria with old immune serum, the same phenomena did not occur under similar conditions in vitro (in the test tube outside the animal body). But when freshly drawn blood serum of an immune animal was used, the process took place in vitro also. Likewise it was noted that freshly drawn blood serum when heated to 56 degrees c., apparently lost its lytic power, but regained it again on the addition of fresh serum, immune or normal. Therefore something

\*From the Wm. W. Bierce Research Laboratory of St. Anthony's Hospital, Oklahoma City, Okla.

must exist in fresh serum which is easily destroyed by heat (thermolabile), or on standing which supplements the action of lysins and "reactivates" inactive serum.

On account of this peculiar quality of supplementing the inactive serum so that it can regain its effectiveness, Ehrlich called the reactivating substance "complement."

Accordingly, the complement is a normal non-specific substance which is found in the body fluids (particularly abundant in the blood serum) of every organism; its existence is evidenced either by the activation or reactivation of bacteriolytic anti-bodies. And lysis (bacteriolysis, hemolysis) is a complex process, which is produced by the interaction of two substances; one, the lysin, is formed through an immunizing process, and accordingly is a specific anti-body of great stability, while the other, the complement, is a normal non-specific and very labile serum substance.

Ehrlich advocated a chemical conception of the essential process of bacteriolysis. He believed that the specific substance formed by immunization, called the lysin, or immune body, or anti-body, is characterized primarily by the fact that it has two binding groups. One of these has a chemical affinity for bacteria, or red blood cells, and is therefore known as the "cytophile" or "cell binding group"; the other is characterized by its binding affinity for complement and is therefore known as the "complementophile" or "complement binding group"; also because of its two binding groups (receptors) the immune body itself is called amboceptor, that is, double receptor. Thus for practical purposes, lysin, anti-body, immune body, and amboceptor may be considered synonymous terms.

It is now plain that neither bacteriolysis nor hemolysis can take place without the presence of complement. At first it was thought that complement differed in the various serum reactions—that numerous complements existed within one individual serum. This was the theory of multiplicity of complement and was upheld by Ehrlich, Morgenroth and Metchnikoff. Bordet and Gengou, on the other hand, although agreeing with the idea that the complement varies in different animals, denied its multiplicity and contended that any given serum contains one complement—the theory of unity of complement.

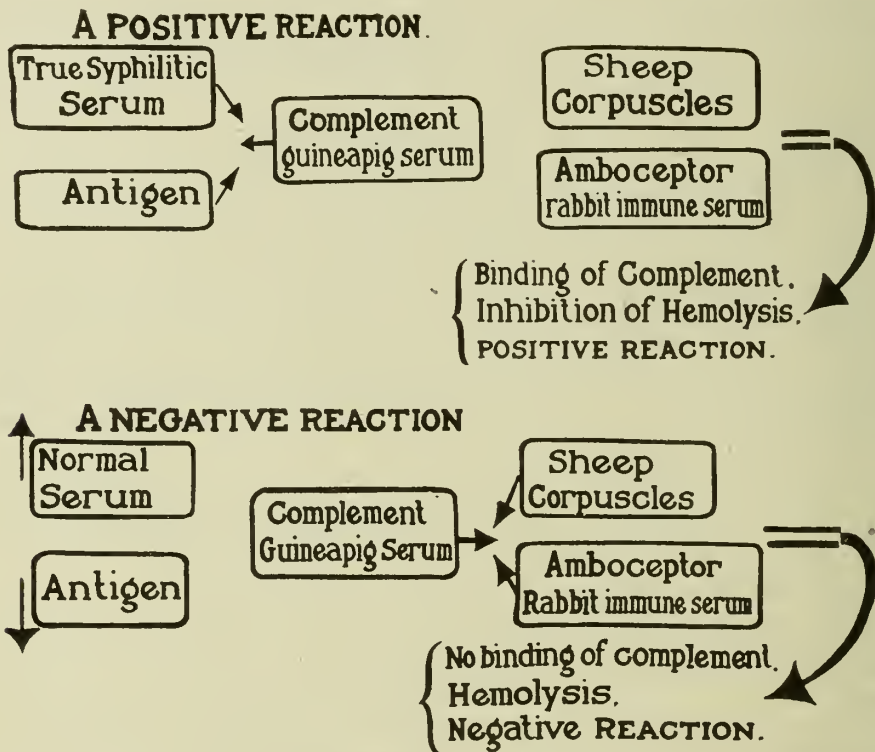
It would be superfluous to cite all the experimental data supporting these opinions, but nevertheless, it will not be out of place to review the classical experiment of Bordet and Gengou, which corroborated the existence of only one complement; thus offering the fundamental principle for the establishment of a most important method of serum diagnosis, namely, complement fixation.

Before taking up this experiment, however, I wish to define one more term—namely "antigen". Any substance which, when injected into an organism, can stimulate the production, or formation of anti-bodies, has been conveniently termed "antigen". Thus bacteria, red blood cells, or any foreign substance injected into the body is an "antigen" if it causes the production of immune bodies.

Bordet and Gengou mixed in a test tube typhoid bacteria (antigen), inactivated typhoid immune serum (amboceptor) and normal serum (complement). Union of the bacteria and immune serum first took place followed by the absorption of, and coalescence with, the bacteriolytic complement contained in the normal serum. As a result, bacteriolysis occurred and the bacteriolytic complement was used up during this process. Bordet and Gengou reasoned that if the bacteriolytic and hemolytic complements were identical, then in the above mixture of typhoid bacteria, immune serum, and normal serum, the hemolytic as well as bacteriolytic complement existed, the hemolytic complement should be present. Accordingly after a certain interval, washed erythrocytes and inactivated homologous immune serum were added and hemolysis looked for. No hemolysis took place, thereby attesting to the fact that bacteria in the first part of the test had "fixed" (held in check) not only the bacteriolytic but also the hemolytic complement. Bordet and Gengou thereupon named this test "Complement Fixation" or "Complement Binding."

Through the complement fixation, as introduced by Bordet and Gengou, one is enabled to prove the presence of specific anti-bodies when the antigen is known; or reversely, an unknown antigen provided the specific anti-body is given. This method of serum diagnosis can be sidely employed, as the majority of bacteria and immune sera, when mixed homologously, give a positive reaction, viz: the absence of hemolysis, proving the absorption of complement by the union of antigen and its specific amboceptor. Hemolysis indicates that the mixed bacteria and serum are not homologous, as the complement is left free and given a chance to unite with the added erythrocytes and hemolytic amboceptor.

In case the antigen is known—e. g., typhoid bacilli, the occurrence of hemolysis indicates that the examined unknown serum contains no typhoid amboceptors. Thus unknown sera can be tested for tubercular, gonococci, streptococci, meningococci and many other bacteriolytic amboceptors.



Wassermann, Neisser and Bruck first used the complement fixation of Bordet and Gengou in the sero diagnosis of syphilis, and today it is one of the most widely used methods of laboratory diagnosis.

A glance at the foregoing chart<sup>1</sup> will explain, I think, what is meant by a positive reaction, and what is meant by a negative reaction.

If you mix the serum of a true syphilitic with antigenic extract, plus complement (guinea pig serum), plus sheep corpuscles, plus amboceptor, you will get no hemolysis. Binding of complement has taken place with consequent inhibition or absence of hemolysis. If, however, the blood serum comes from a non-syphilitic individual, there is no binding of complement, the phenomenon of hemolysis ensues, so that at the end of the technical procedure you will have a clear transparent

1. Technique of the Wassermann Reaction for syphilis.—R. B. H. Gradwohl, M. D., St. Louis.



reddish fluid. There was no binding of complement so hemolysis took place and this we term a negative reaction.

Wassermann and his followers at first thought that his inhibition of hemolysis was due to an actual combination between an antigenic extract, containing the true antigen derived from the bodies of *spirochaeta pallida* from syphilitic liver, in the presence of anti-bodies derived from the syphilitic serum. Yet Porges and Meier in Berlin, Landsteiner in Vienna, Mueller and Poetzl, later Levaditi and Yamanouchi in Paris, as well as many others, soon found that you get the same complement-anchor-phenomenon whether you use luetic liver, normal liver from man, or from many other animals. Furthermore these investigators proved that this extract could be made up in alcoholic solution, not necessarily in watery solution as originally emphasized by Wassermann.

Landsteiner, Mueller and Poetzl believed the particular antigenic power resided in lipid substances, while Porges and Meier believed in the lecithin content of the alcoholic solutions as explanatory of the phenomenon. It remained for Noguchi, at Rockefeller Institute, to work out the exact biochemistry of the substance found in human and other animal viscera, which bound complement in presence of true syphilitic serum. Without going into the enormous data of tireless research which this worker produced, we will boil it all down to the results which he found, namely, that the complement fixing property of these antigens resided in the acetone insoluble substances, lecithin and phosphatids.

As to an explanation of the exact rationale of the complement fixation reaction, we are still somewhat at sea. Levaditi and Yamanouchi's theory that the reaction depends upon a physio-chemical interaction between substances in serum and lipoids in antigen, resulting in an alteration in the state of the mixture, has gained many adherents. Recently Bruck and Stern have explained the reaction on the assumption that syphilitic infection produces a degeneration of tissues with a pouring out of proteid lecithin compounds into the blood, and that these substances react physically with similar or identical substances in the antigen to bind complement.

At all events we can say on theoretical grounds there is some substance in syphilitic serum, which, in the presence of acetone insoluble, and ether soluble bodies, binds complement and inhibits hemolysis when hemolytic amboceptor and appropriate corpuscles are mixed.

Owing to the apparent complexity of the original Wassermann reaction, various investigators attempt to simplify it and shorten the technical procedure in one way or another. Without going into an elaborate discussion of the modifications that have been attempted, it can be stated that the preponderance of serological opinion today swings to as close an adherence as possible to the original Wassermann reaction. Wassermann and his followers, what is known as the Berlin school of serologists, cling tenaciously to the original technique. The writer is inclined to agree with them. It has been found that all modifications of the Wassermann test have accomplished nothing in the way of shortening the technique without vitiating the specificity of the test. The attempts to produce reagents which can be kept by the practitioner dried upon filter paper, etc., as originally proposed by Noguchi, Von Dungern and others, have been practically abandoned even by their originators. All have come to the conclusion that these reagents, antigens, complement, and amboceptor are of a nature not possible to maintain potent, stable and active under such conditions. Serologists, who have originally advised keeping reagents in this fashion, have admitted the instability of such reagents. So far as the writer is concerned he sees no advantage in using any modification which does not shorten the process, which does not guarantee reliable results, and which gives positives in cases that are clearly non-syphilitic. No modification so far proposed gives a shorter technique and easier manipulation or more delicate reaction than the original.

Wassermann work requires a high standard of laboratory training and aptitude, never ending zeal and close application. These factors should be considered by the clinician in entrusting his consultation work along these lines, else this work will fall into disrepute that is undeserved. The limitations of the test are many, the limitations of the workers are boundless. The chances of error in diagnosis as a result of these sets of limitations should constantly be borne in mind.

Eliminating for the moment the limitations of the workers in serology, let us say in as few words as possible something about the limitations of the Wassermann test itself in making up the full diagnosis. What does a positive reaction mean? What does a negative mean? Practically all of the authorities at present regard a positive Wassermann as proof of syphilis, either past or present, and the weight of opinion considers that it is present. In other words, a positive Wassermann is thought to mean the presence somewhere in the system of living spirochaetes. The exceptions to this rule are so few, about 0.5 per cent., and the other diseases in which it occurs are so easy to differentiate from syphilis by the symptoms and history, that their importance may be considered negligible. However, it has been demonstrated that one may obtain a positive Wassermann reaction in yaws, a tropical spirochaetal disease, in malaria, icterus, beri-beri, scarlet fever, trypanosomiasis, in lepra tuberosa and in certain cases of tuberculosis.

In *tabes* we find a diversity of opinion as to the exact number of cases in which it has been found positive. Levaditi and Marie were the first workers to find it in this disease. Nonne claims it is present in 75 per cent of cases in the blood and 50 per cent in cerebro-spinal fluid. Noguchi gives 40.9 per cent in blood serum. General statistics are about 60 per cent. In general we can say of *tabes* "ohne syphilis, keine *tabes*."

As for *dementia paralytica*, let us note Plaut's striking figures, who in the sera of 200 cases found but one negative reaction. Furthermore, he found that whereas it was positive in 95 per cent of cases examined in the blood serum, it was present in 99.5 per cent in cerebro-spinal fluid. Edel and Lesser found it present 62 times in 62 cases examined, namely 100 per cent. Boas found it positive 100 per cent in 42 cases.

In congenital syphilis the child with active manifestation constantly shows a positive Wassermann reaction. A Wassermann reaction may spontaneously disappear from the blood and later reappear entirely independent of treatment. For this reason the writer believes in the routine serial examination of the blood for the Wassermann reaction.

Value of Complement-Fixation in Lues.

Stages	Extremes	Average Total Percentage
Primary	38.6—98	69.8
Secondary	73.3—100	89.4
Tertiary	57.4—100	78.1
Early latent	20 — 85.4	51.
Late latent	20 — 88.7	47.
Hereditary	87.5—100	94.5
Cerebral spinal	16.7— 88.5	47.6
Gen. paralysis	59. —100	88.1
Tabes	56. — 90	62.66

The table herewith is a condensation of a table by Noguchi in his "Serum Diagnosis of Syphilis," and includes the high and low per cent of positives reported by a group of some thirty of the foremost serologists in Europe and America. The total per cent in the last column is the average of all their figures and is, I think, a conservative estimate of what we may expect of the Wassermann reaction in the various stages of syphilis. As for the influence of treatment upon this reaction, it might be said that anti-syphilitic treatment usually makes it become negative, yet we have instances where under full treatment a negative may become positive. It

may become stronger under treatment where before treatment it was weaker, not on account of the treatment, but in spite of the treatment. In order to find out the effect of treatment one should withhold anti-syphilitic treatment for at least four weeks before taking the blood for the Wassermann. A patient saturated with alcohol at the time the blood is taken will invariably give a negative reaction.

Can we prognosticate from Wassermann examinations? Can we say to a patient that because he has received careful treatment and has a negative reaction, he can be assured that he will not develop tabes or paresis? Emphatically no. Are we warranted always in suspending treatment when the reaction becomes negative? No. We likewise know nothing as to the significance of the persistence of the reaction in the so-called late-latent period. A positive Wassermann reaction means simply that here we have one of the most constant symptoms of syphilis, and that such a case must be treated as syphilis. In diagnosis of cerebro-spinal syphilis the four reactions of Nonne for syphilis should be rigidly looked for, namely, the Wassermann reaction of the blood, the Wassermann reaction of the cerebro-spinal fluid, the globulin reaction and the cell count. In cases of syphilis the cerebro-spinal system, one or all of these reactions may be present. A positive of the blood and a negative of the spinal fluid is of considerable importance in differential diagnosis. For instance, a positive of the blood in the absence of a similar reaction of the spinal fluid may indicate that the patient has a generalized syphilitic infection, and his neurological symptoms are not due to an involvement of the cerebro-spinal axis.

In closing the writer should say that the Wassermann reaction placed where it belongs, namely, secondary to clinical manifestations, is of considerable importance in making the diagnosis of lues. It is a symptom, and only a symptom, and should never be given greater consideration or thought. Simply a symptom. The writer does not believe that this or any other laboratory test should outweigh a group of well marked clinical manifestations. When positive, it should be an important factor in assisting in the diagnosis. When absent, manifestly it should not serve in any sense to eliminate the possibility of syphilis.

## PROCEEDINGS OF ST. ANTHONY'S CLINICAL SOCIETY.

February 19, 1917.

DR. A. A. WILL, Pres.

DR. LEILA E. ANDREWS, Sec.

### Two cases were shown by Dr. E. S. Ferguson.

First: a young man with gumma of the iris. The case was on anti-syphilitic treatment.

Second: was a boy with dislocation of the crystalline lens in both eyes, one eye posterior and the other into the anterior chamber. The interesting feature in the history was the fact that the father and five out of seven children showed the same congenital deformity. The cases were all rare and quite interesting.

### Cases presented by Dr. John W. Riley.

A man 22 years of age. Family history negative. Personal history: Neisserian infection three or four years ago. Denies lues.

**Present Complaint:** About six weeks ago, the glands beneath the left lower jaw began to increase in size. They are not painful but have continued to increase in size until now there are three that are as large as olives. They are hard, smooth and move readily on the underlying and overlying tissues.

**Examination** shows the right and left submental and left submaxillary glands enlarged. The femoral and inguinal glands are enlarged, discrete and hard. The mouth and throat are negative. Scattered over the surface of the skin of the back, chest and abdomen are many copper colored macular spots. The blood Wasser-



mann is strongly positive. Under salvarsan and mercurial ointment the rash and glands are rapidly disappearing.

This case is presented because of the association of markedly enlarged sub-maxillary glands and a secondary eruption, and the inability to discover the source of primary lesion.

**Hospital Number 15740**—Man 53 years old. Family history negative. Personal history: Pneumonia at 24 years, typhoid at 48 years, has had attacks of stomach trouble for years, that is nausea and vomiting, acid eructations and occasional pain after eating.

**Present Illness** began four weeks before entrance into the hospital. After eating liver sausage, he was taken with a severe pain in his epigastrium, which has continued in spite of treatment. He feels weak and tired, has lost considerable weight, and has noticed tarry stools for some time past.

**Physical Examination** shows many bad teeth and a mass is palpable and tender in the left hypogastrium. This mass seems to extend well up under the costal margin, it is fixed and not affected by respiration. The urine is yellow, cloudy, alkaline, 1030 and a heavy cloud of albumen. The feces: light yellowish brown, soft stool, no macroscopic or microscopic blood, occult blood strongly positive, bile present, many vegetable cells and fibers, a few fatty acid crystals, no ova or parasites found. Gastric contents: Schmidt meal 50 c.c. recovered, no raisins found, occult blood positive, lactic acid positive, no Oppler-Boas bacilli present, total acidity 14, free hydrochloric 0. Ewald test meal: 25 c. c. recovered, lactic acid present, total acidity 12, free hydrochloric 6. The blood: H. B. 80 per cent., R. B. C. 5,000,000, W. B. C. 9,600. Normal differential count. Blood Wassermann negative.

**Operation:** Right rectus incision. The vessels of the stomach and transverse colon are markedly engorged. On the surface of the great omentum are scattered pin head white spots. The gall bladder and ducts, kidneys, duodenum and lymph nodes negative. The stomach is pushed well over to the left and it was found unable to deliver it through the incision. A broad pulsating mass is felt behind the stomach and gastrocolic omentum and it extends to the left well up to the cardia and spreads over the vertebral column to the right. Incision made through the great omentum and gastro-colic omentum, the posterior wall of the stomach was adhered to the mass and was with difficulty stripped up with gauze. A small aspirating needle was inserted into the tumor and about 16 ounces of a clear fluid aspirated. The cyst was then opened and the surrounding peritoneum was carefully stitched about the opening. Exploration with the finger shows a smooth lined cyst containing considerable clabbered-like material. The cyst was swabbed out with pure phenol, a large drain inserted and wound closed in the usual manner. Vaseline applied to protect the skin from discharge. The laboratory report of the fluid evacuated showed an alkaline reaction, starch digestion positive, protein digestion doubtful.

**The Diagnosis:** Pseudo-cyst of the pancreas. These cyst were first described by Lloyd in 1892.

His conclusions were: 1. That contusions of the upper part of the abdomen may be followed by the development of a tumor in the epigastric, umbilical, and left hypochondriac region. 2. That such tumors may be due to fluid accumulations in the lesser peritoneal cavity. 3. That when the contents of such tumors are found to have property of rapidly converting starch into sugar, we may assume that the pancreas has been injured. 4. That many such tumors have been regarded as true retention cysts of the pancreas, and that this opinion has been formed on insufficient evidence. 5. That the diagnosis of the distention of the lesser peritoneal cavity before operation can usually be made by the characteristic shape of the swelling. 6. That these cysts may press forward through the gastro-hepatic omentum, the gastro-colic omentum or the transverse meso-colon. 7. That early median abdominal incision and drainage is the safe and proper treatment.

**Case shown by Dr. Lea A. Riely.**

**Pemphigus.** Mrs. B.; nativity, Ohio. Age 54 years. Farmer's wife. Lived in country until three months ago. Father living, at 84 years. Mother died at 33; childbirth. Family history otherwise negative.

**Personal history:** Usual diseases of childhood. Mild attack of rheumatism in 1915. Sore mouth when nursing first child. Was hard to cure. Came back on three successive lactations when child was two or three weeks old. Has had 8 children, one set of twins. One of the girl twins died at 18 months from some brain trouble. When 18 years old had irregular menstruation. Normal menopause at 45. Lost upper teeth 20 years ago, lower teeth 15 years ago. Never had headaches. Stomach sour only from overeating. Mind bright. Black eyes, gray hair. Cheerful disposition. Not nervous temperament.

**Present Illness:** Began to feel weak and bloating of legs and bowels; thought was getting fleshy. Skin always has been clear until she began to break out on the arms near the shoulders. November 20th began to itch very much, a breaking out went from shoulders to other parts of the body and spread rapidly during the succeeding month. The eruption starts first as an erythema and then is of a bullous type rising abruptly from an uninflamed skin and when broken leaves a bleeding surface covered with a pyogenic membrane. The eruption shows no predilection to any particular part of the body. The flexors and extensors are equally vulnerable. The mucous membrane of the mouth contained only one or two blebs, hemorrhagic in character. Conjunctiva not involved. The legs were enlarged almost to a point of elephantiasis and covered with almost a confluent eruption of the bullae. No tendency toward a mixed infection at any point of denuded skin.

**Laboratory Report:** Blood: H. G. B., 80 per cent; R. B. C., 4410000; W. B. C. 13050; P., 78 per cent; L., 18 per cent; L. M., 1 per cent; T., 1 per cent; E., 1 per cent; B., 1 per cent. Urine negative. Blood Wassermann negative. Smear and culture from serum of bullae, staphylococci, streptococci. Few gram positive diplococci. Gram negative bacilli (B. Coli).

**Treatment:** Under moist dressings of hyposulphite of sodium applied to the surface after the blebs were broken, relieves the itching completely. This was interspersed with zinc oxide calamine lotion. The use of auto sero therapy. Would draw 150 c.c. of blood and from this sterile serum would reinject it in 5 c.c. doses every three days, with a very marked diminution of the eruption and itching. Relief was most marked after the blood letting and the blebs remained off the longest.

Under the above treatment the case is gradually being relieved, gaining in flesh, sleeping at nights, swelling of legs entirely gone but recurring crops of bullae coming out from time to time.

This was discussed by Drs. Lain and West.

---

**PYORRHEA ALVEOLARIS.**

The bacterial findings in the mouth and their relations to pyorrhea and interstitial gingivitis are discussed by A. W. Lescolier, Detroit (*Journal A. M. A.*, Feb. 10, 1917), who reviews some of the literature and says that his personal observations relative to the occurrence of streptococci, staphylococci and pneumococci in pyorrhea would place the streptococci first in frequency, and the staphylococci next, the pneumococcus being observed in only a small per cent. of cases. The tendency, he says, to consider any etiologic factor as an entity instead of its relations to other influences is unfortunate, as irritation and injuries and metabolic disturbances, may also play a part. The bacterial element is probably most important, however, in the destructive tissue changes, and certainly so in the serious sequels.

# JOURNAL OF THE OKLAHOMA STATE MEDICAL ASSOCIATION

VOLUME X

APRIL, 1917

NUMBER 4

PUBLISHED MONTHLY AT MUSKOGEE, OKLA., UNDER DIRECTION OF THE COUNCIL

DR. CLAUDE A. THOMPSON, EDITOR-IN-CHIEF

ENTERED AT THE POSTOFFICE AT MUSKOGEE, OKLAHOMA AS SECOND CLASS MAIL MATTER, JULY 26, 1912

THIS IS THE OFFICIAL JOURNAL OF THE OKLAHOMA STATE MEDICAL ASSOCIATION. ALL COMMUNICATIONS SHOULD BE ADDRESSED TO THE JOURNAL OF THE OKLAHOMA STATE MEDICAL ASSOCIATION, BARNES BUILDING, MUSKOGEE, OKLAHOMA.

The editorial department is not responsible for the opinions expressed in the original articles of contributors.

Reprints of original articles will be supplied at actual cost, provided request for them is attached to manuscript or made in sufficient time before publication.

Articles sent this Journal for publication and all those read at the annual meetings of the State Association are the sole property of this Journal. The Journal relies on each individual contributor's strict adherence to this well-known rule of medical journalism. In the event an article sent this Journal for publication is published before appearance in the Journal, the manuscript will be returned to the writer.

Failure to receive the Journal should call for immediate notification of the editor, 507 Barnes Building, Muskogee, Okla.

Local news of possible interest to the medical profession, notes on removals, changes in address, deaths and weddings will be gratefully received.

Advertising of articles, drugs or compounds not approved by the Council on Pharmacy of the A. M. A. will not be accepted.

Advertising rates will be supplied on application. It is suggested that wherever possible members of the State Association should patronize our advertisers in preference to others as a matter of fair reciprocity.

## EDITORIAL

### VALE CHIROPRACTIC.

The medical profession of Oklahoma and the intelligent people of the State may well congratulate themselves on the good common sense displayed by the last legislature. The blatant mouthings and senseless hysteria of the Chiropractic lobby and its friends availed not against the cold logic of common sense and righteous persuasion advanced by our legislative committee and the many physicians who exerted themselves to further a law, which, as nearly as can be under existing conditions, requires all who propose to heal or treat the sick to qualify and show their fitness for this important function.

As is well known, the plans by which this end has been achieved were laid long ago and were the culmination of experience and bitter disappointment received at the hands of previous legislative assemblies. Nothing could have been accomplished without the aid of many loyal physicians and friends throughout the State. With few exceptions, physicians called upon to give assistance and advice responded promptly. Many made special trips to Oklahoma City to aid with their advice and presence and to all these the Legislative Committee acknowledges its deep gratitude.

Elsewhere is a full text of the law as it now reads, with the officially recorded vote on the measure. This vote should be filed away for future reference. The legislators who by their vote showed a disposition to protect the people from future charlatanism and to elevate the healing art as far as they could should not be forgotten in the event they need our help.

The "crowning iniquity of the medical trust," "this damnable bill," "damnable crime," etc., are only a few of the pet epithets applied to Senate Bill 111 and the efforts of educated gentlemen with years of skilled training and endeavor to lighten the burdens of mankind, by the Chiropractic lobby and the ignorant spawn comprising their practitioners over the State. In some instances, even the clergy, influenced by the persuasion of chiropractic members of their congregations, appealed to legislators to vote against 111 and for 154, which proposed to legalize the



chiropractic and give them a separate board of examiners. One glaring instance of this misplaced zeal occurred from Muskogee County, where the head of a school which received its original nutrient endowment from the same source that created the Rockefeller Foundation for Medical Research importuned the legislative representatives to vote against 111. Just what the intelligent head of the Baptist Board controlling this institution would say were this activity known and appreciated is not difficult to imagine.

At the psychological moment, and gauged probably to place the House of Representatives in a panic to vote against the bill, which had passed the Senate and gone over to the house for action, was the astounding, and utterly foundationless, advertised charge of "Dr." Willard Carver, active head of the Chiropractics, that the medical profession had raised a fund of more than \$674,000 to influence legislation detrimental to Chiropractic, charging by implication at least that the Senate had been bribed. The Senate promptly pulled the teeth out of this charge by citing Carver to appear and answer contempt charges. About all he appeared with was a tragic or theatric air and inability to offer a single word substantiating the charge, which fell flat, netting him a \$500.00 fine, ten days in jail, retrial and re-sentencing at the hands of the county prisoners, via the "Kangaroo" system and the light task of assisting in cleaning his temporary domicile not by chiropractic tenets, but with soap and water.

### THE NEW LAW GOVERNING EXAMINATIONS.

SENATE BILL NO. 111. BY COMMITTEE ON PUBLIC HEALTH.

#### AN ACT AMENDING SECTION 6910, REVISED LAWS OF OKLAHOMA, 1910, SAME RELATING TO THE PRACTICE OF MEDICINE.

*Be It Enacted by the People of the State of Oklahoma.*

Section 1. Section 6910, Revised Laws of Oklahoma, 1910, is hereby amended to read as follows:

"Section 6910. Every person shall be regarded as practicing medicine within the meaning and provisions of this Act, who shall append to his name the letters 'M. D.', 'Doctor', 'Professor', 'Specialist', 'Physician', or any other title, letters or designation which represent that such person is a physician, or who shall for fee or compensation treat disease, injury or deformity of persons by any drugs, surgery, manual or mechanical treatment whatsoever. But nothing in this article shall be so construed as to prohibit the service in the case of emergency, or the domestic administration of family remedies; nor shall this Act apply to any commissioned medical officer in the United States Army, Navy, or Marine Hospital service in the discharge of his professional duties, nor to any legally qualified dentist, when engaged exclusively in the practice of dentistry, nor to any legally licensed optometrist when engaged in the practice of optometry as defined by law, or to any physician or surgeon from another state or territory when in actual consultation with a legal practitioner of this State, if such physician or surgeon is at the time of said consultation a legal practitioner of medicine or surgery in the State or territory in which he resides, nor to any physician or surgeon residing on the border of the neighboring State, and duly authorized under the laws thereof to practice medicine and surgery therein, whose practice extends within the limits of this State, providing that such physician or surgeon shall not open an office or a place to meet patients or receive calls within the limits of this State; Provided, that any person claiming to practice any drugless system than is herein provided for, may, upon showing evidence of having attended a reputable college requiring actual attendance for a period of at least twenty-seven months, and upon passing an examination in anatomy, chemistry, bacteriology, pathology, surgery, physical diagnosis, obstetrics,

gynecology and pediatrics and medical jurisprudence, toxicology, histology, and physiology shall receive a license to practice as a drugless practitioner, such license entitling the holder to practice drugless practice only.

One chiropractor shall be appointed to membership upon the State Board of Medical Examiners, under the same procedure as is now followed in the selection of one osteopathic member of said Board. Said chiropractor shall examine all applicants of his profession as to their knowledge of the technique of chiropractic and the balance of the examination shall be conducted according to the rules now followed by the said Board in the examination of other applicants. Provided, that nothing in this Act shall pertain to any system of religion."

### THE LEGISLATIVE RECORD ON 111. SAVE THIS.

The following members of the legislature voted for Senate Bill 111, erroneously called by many the "Medical Bill," the "Doctors' Bill," the "Anti-Chiropractic Bill," etc. As a matter of accuracy and correctness this bill, which is now law, should have been called what it really is, a bill to raise the standard of examination to those who propose hereafter to "practice medicine," without reference to the wild claims that the candidate is not proposing or does not propose to practice medicine, but cures by "conjuring," rubbing, etc.

The medical profession, sponsors of common sense and the rule of reason, should not lightly forget these men who voted to protect the people of Oklahoma against charlatanism and inefficiency:

**Senate—Yeas:** Beauman, Board, Buckner, Burns, Carpenter, Chase of Nowata; Cordell, Davidson of Tulsa; Davidson of Haskell; Edmondson, Ferguson, Hall, Hogg, Kerr, Knie, Logan, McAlister, McIntosh, Rider, Risen, Snyder, Thomas, Vaughan, Wilson of Greer. Total 24.

**House—Ayes:** Acton, Adams, Baker, Barry, Beatte, Beck, Berry, Blackard, Bobo, Bond, Butler, Campbell, Cartwright, Chapman, Collums, Condon, Craver, Dickinson, Disney, Dolan, Draughon, Durant, Eakins, Elder, Fitzgerald (Kiowa), Fitzgerald (Pittsburg), Fox, Gibson, Gish, Haile, Hamilton, Harper, Harris, Harvey, Hartenbower, Headley, Hensley, Hicks, Hinds, Hodges, Hughes, Hultsman, Humble, Hurst, Jackson, Johnson, Kelly, Marsh, Mayfield, Meacham, Miller, Neff, Newman, Northcutt, Norvell, Pardoe, Petry, Powell, Riley, Robertson, Rogers, Sheegog, Shirley, Shores, Speer, Thomas, Ticer, Treadway, Vaden, Waldrep, West, Wheeler, Wimbish, Wismeyer, Woodard, Woods, Mr. Speaker, Nesbitt. Total 77.

From a physician's standpoint the following should be relegated to exactly the same status as a certain insignificant minority of the United States Senate, who recently voted to tie the hands of the President in the great emergency confronting the Nation. Certainly they, who forgot the plight of a helpless people as to public health protection, deserve the same execration at the hands of intelligent people:

### Senators Voting "No"

Name	Address
Cline	Newkirk
Clarence Davis	Sapulpa
John Golobie	Guthrie
R. A. Keller	Marietta
O. W. Killam	Grove
Thos. J. O'Neill	Chickasha
M. M. Ryan	Poteau
J. J. Smith	Afton
Tom Testerman	Morrison
Fred E. Tucker	Ardmore
Geo. E. Wilson	Cestos

## Representatives Voting "No"

County	Name	Address
Alfalfa	J. C. Smith	Cherokee
Atoka	Jas. A. Thurmond	Tushka
Beckham	Algernon Mansur	Elk City, R No. 4, Bx 57
Blaine	L. A. Everhart	Bickford
Canadian	Jack Barker	El Reno
Cimarron-Texas	M. W. Pugh	Boise City
Comanche-Cotton	Lewis Hunter	Lawton
Creek	J. M. Morgan	Bristow, R. No. 1, Box 7
Creek	Will Cheatham	Bristow
Dewey	M. L. Jones	Trail
Ellis	Bert E. Hill	Gage
Garvin	Alfred Stephenson	Stratford
Greer	J. O. McCollister	Mangum
Jackson	R. J. Morgan	Altus
Logan	Amos A. Ewing	Guthrie
Major	S. J. Beardsley	Fairview
Oklahoma	S. S. Butterfield	Oklahoma City
Pawnee	Millard F. Grubb	Maramec
Washita	W. T. Graves	Sentinel, R. No. 2.
Woods	W. H. Olmsted	Waynoka

Senate—Excused: Bickel, Brown, Chase of Seminole, Edwards, Johnson, Knight, Watrous. Total 7. Absent: Hickman, Leach. Total 2.

House—Absent: Christopher, Garrett, Hendrickson, Houston, Keegan, Neal, Nicholson, Platt, Rowland, Scott, Walden, Warren, Welch. Total, 15.

Mr. Graves offered in explanation of his vote on Senate Bill No. 111, that the bill was too drastic in form.

## FACTS AND VIEWS ABOUT THE ANNUAL MEETING PLACE.

The next meeting of the State Medical Association will be held at Lawton-Medicine Park, May 8-9-10.

Medicine Park is twelve miles northwest of Lawton on Medicine Creek, in the Wichita Mountains. Near this Park is Lake Law-Ton-Ka, where the city of Lawton and Ft. Sill get their water supply by gravity system.

A short distance beyond, towers the high peak of the noted Mt. Scott. The old and new government posts, Ft. Sill, are directly on our way from Lawton to the Park.

Upon arriving at Lawton, ample transportation by automobile will be in readiness to take you through the Government reservation by way of Ft. Sill, across Medicine Creek and through the mountains to the Park. The only restrictions placed upon you when you arrive at the Park will be not to tear down the mountains or kick the water out of Medicine Creek. You may have, as you wish, either hotel or cottage accommodations.

The management of Medicine Park and the various physicians' committees having to do with this meeting will greatly appreciate the assistance of those who propose to attend by giving advance notice. If you are going to Lawton-Medicine



Park, please write Dr. G. Pinnell, Lawton, advising him if you will come by train or automobile, how many there will be in the party, probable number of days you will stay, on what day you will arrive and if you wish hotel or cottage accommodations or if you will bring your own tent.

L. T. Gooch,  
L. C. Knee,  
C. W. Baird,  
Committee.



Views of Medicine Park



Views of Medicine Park



Views of Medicine Park



## CURRENT MEDICAL LITERATURE

Conducted by

DRS. CURT von WEDEL, Jr., and L. J. MOORMAN, Oklahoma City  
and FRED J. WILKEMEYER, Muskogee

## SYMPOSIUM ON THE RELATIVE MERITS OF CHOLECYSTECTOMY AND CHOLECYSTOSTOMY.

By Lund, Mayo, and Deaver.

(Surgery, Gynecology and Obstetrics, March, 1917)

**Fred B. Lund** of Boston in his presidential address before the Clinical Congress of Surgeons of North America, stated that he believed that the operation of cystectomy would become almost a routine in preference to drainage, because the infection usually came by the blood stream and the bacteria were lodged within the wall of the gall-bladder. Rosenow has shown that bacteria from infected gall-bladders, injected into animals, produce cholecystitis in more than two-thirds of the animals so injected. Coffey has shown that regurgitation of infection from the duodenum would be very difficult because the valve action is so perfect that the duodenum may burst from mechanical pressure before regurgitation would take place. The argument that pancreatitis in itself precluded gall-bladder removal, was false, because when the gall-bladder is removed, we have more or less dilatation of the sphincter and common duct with continuous drainage, whereas if the gall-bladder were left, we would have a source of constant re-infection.

In conclusion he states that cystectomy is indicated in: (1) thick, acutely inflamed or gangrenous gall-bladders; (2) in chronically thickened gall-bladders; (3) extensive hydrops of the gall-bladder; (4) in suspicion of malignancy; (5) in so called "strawberry gall-bladder"; (6) in chronic gall-bladders that are adherent to surrounding organs.

Cholecystostomy is indicated: (1) whenever the difficulty of cystectomy is so great that the life of the patient would be endangered thereby; (2) in cases of pancreatitis with marked jaundice; then we should do a cholecysto-enterostomy, or if this be impossible, a cystostomy; (3) in cases of stricture of the common duct a cholecysto-enterostomy is advisable.

**Dr. C. H. Mayo** is likewise an advocate of cystectomy, stating that in the eleven months from November, 1915, to October, 1916, in their clinic, 776 cholecystectomies were done, while only 43 cholecystostomies were performed. His argument is much the same as is recognized by most surgeons, that bacteria enter by means of the blood stream and are lodged within the wall of the gall-bladder. One interesting feature he mentions is the importance of palpating the glands along the common hepatic and cystic ducts—there being from three to six such glands. They are enlarged in the presence of infection and stagnation of the bile, even though there is little thickening and no adhesions present. He states: "The fact is now recognized that one-fourth of all diseased gall-bladders do not contain gall stones, but they cause severe colic from obstruction by balls of mucus and thick bile." He likewise states that pancreatitis occurs rarely without accompanying inflammation of the gall-bladder, and when it does occur in persons whose common duct is obstructed by the pancreas, is a symptom and there may also be pain in the back.

Cholecystectomy is indicated in cystic gall-bladders with destroyed mucosa, empyema, and functionless strawberry gall-bladder. Cholecystostomy may be used when evidence of disease is slight, with no gastric symptoms present, even in the presence of stones. Cholecystostomy is likewise indicated whenever the resistance of the patient is such that the more severe operation of cystectomy is not warranted.

**John B. Deaver**, in his article, is likewise a sincere advocate of cholecystectomy, stating that the mortality difference in the two types of operation is nothing compared to the mortality due to the local disease and general condition of the patient. He says if the case for cholecystectomy must rest upon proof of the primary mortality equal to or less than that of cholecystostomy, then in my judgment it will never justify itself. But cholecystostomy will not cure all cases. We must remove the gall-bladder which is the seat of hydrops, or empyema, or when the cystic duct is strictured or contains an impacted stone. In 65 per cent of the cases of recurrence after cholecystostomy, the cause of recurrence was traceable directly to failure to remove the gall-bladder. My feeling in regard to these two operations, speaking generally, may be stated thus: cholecystectomy is preferable in the hands of the master of biliary surgery since the mortality is but little higher in selected cases and the percentage of cures of the infected tract is greater. Cholecystectomy in the presence of jaundice and in the absence of a markedly and microscopically diseased gall-bladder is in my judgment out of place. Under these conditions cholecystostomy is the operation of choice.

von Wedel.

## RECURRENCE OF GALL STONES.

By John B. Deaver.

(American Journal of Surgery, February, 1917)

In a most excellent article on this subject, the author states, that in his experience, the most common causes of recurrence were unremoved stones in the gall-bladder, adhesions, and stones in the common duct. He believes that early diagnosis and prompt surgical relief by means of cystectomy is the ideal

treatment of stones in the gall-bladder; that there have been more deaths by procrastination and medical treatment than by surgery. He also believes that failure to remove all gall stones at the primary operation was the most potent cause of recurrence of symptoms. Failure to remove stones was due usually, in the hands of the good man, to the extensive pocketing of stones from delayed cases. Deaver believes that free and prolonged drainage of the gall-bladder or common duct is the best means of overcoming recurrence, and he makes it a practice to use large size tubes, allowing them to remain in situ until they practically drop out. The fallacy of medical treatment in cases of stones is clearly to be seen by anyone who has studied operative findings. In cases with extensive sand in the hepatic and common duct, he advises drainage with a T-tube, extending over a period of months or even years. When referring to the formation of gall stones he quotes Moynihan, who states that every gall stone is a tomb stone erected to the memory of the bacterium which lies dead within. Deaver believes with the rest of the surgical profession, that the infection usually arises at some distant focal point. He states that in his experience, the appendix is the focus of infection for nearly all upper abdominal diseases—gall-bladder infections, gastric and duodenal ulcer, pancreatitis, etc. The article ends by stating that disease of the biliary passage is essentially surgical and not medical, and the most common preventable cause of recurrences is late operation. Until this fact has impressed itself indelibly on the physician as well as on the laymen, we cannot expect to improve our percentage of complete cures of gall-bladder and associated diseases.

Abstracted by C. von Wedel.

### HYPERTROPHIC ILEO-CAECAL TUBERCULOSIS.

By Homer Gage, M. D., and Ernest L. Hunt, M. D., Worcester, Mass.

This article is a very important contribution to the surgery of the right lower quadrant. It is of much surgical interest because it is so easily mistaken for cancer, and because it is so readily amenable to surgical intervention. The disease is local in character, comparable to the tubercular glands of the neck and the tubercular processes in the bones. Unlike the entero-peritoneal type of tuberculosis it is rarely accompanied by other active foci of the disease; which favors the contention that it is a primary focus resulting from an infection by way of the intestinal contents, rather than by way of the blood or lymphatic channels. The report of case 2 will suffice.

R. A. H., admitted November 17, 1914. Merchant, 71 years. Has suffered for years from cardiac asthma. One and one-half years ago began to be troubled with gas in the abdomen, which was temporarily relieved by treatment. Five months ago an attack of ptomaine poisoning lasted a week, during which period it was difficult to pass a rectal tube. Two months ago had an attack of severe abdominal pain with nausea and great distress, and again difficulty in passing a rectal tube. Another attack three weeks later. In October he noticed a soreness and a bunch in the right side of the abdomen. He had been seen and examined in Boston where he had received a diagnosis like our own, of cancer of the caecum.

**Physical examination.**—Temperature 97, systolic blood pressure 130, diastolic 80. Tongue dry and coated; there are a few small lymph glands palpable in the neck. Chest, heart area and sounds normal, regular. Lungs negative save for broncho-vesicular breathing and medium dry rales below angle of scapula in right back. Abdomen, lax and soft, liver and spleen not palpable. There is a large firm mobile mass palpable in the lower right quadrant with moderate tenderness on pressure, no muscle spasm. Extremities; knee-jerks present and equal, possible slight oedema of the ankles, no paralysis. Urine acid sp. gr. 1024, no albumen, no sugar.

**Operation November 18.** Dr. Gage; Gas-Oxygen, Dr. Hunt. Five inch right rectus incision. Caecum found to be the seat of a firm tumor the size of a closed fist, suggestive of tuberculosis or cancer. Caecum with about two inches of ileum, the appendix, and five inches of ileum removed with mesentery. Open ends of intestine closed, and a lateral anastomosis between ileum and transverse colon was then made. There then follows a complete detail pathological report, gross and microscopic. The article is profusely illustrated with photographs of the lesion removed and many micro-photographs showing the various stages of the lesion.

**Symptoms:** The onset is slow, gradual and usually associated with vague indefinite pains in the right lower quadrant and symptoms of intestinal indigestion. At this stage it is practically impossible to rule out a chronic appendicitis. When to these symptoms are added an increasing constipation, with attacks of colicky pain, and the discovery of a movable tumor, the probability of malignant disease with stricture is at once suggested. A family or personal history of tuberculosis should, of course, arouse the suspicion of the same lesion when trouble is suspected in the region of the caecum, but is by no means always present, and its absence must not be emphasized too strongly in consideration of lesions of this vicinity. Elevation of temperature and a high leucocyte count are usually wanting, whereas they may be expected in the ordinary inflammation of the appendix. After viewing the tumor in situ and inspecting its gross appearances on section after removal, one still believes the tumor is malignant. The microscope is alone the determining factor.

**Treatment:** For the purely hypertrophic form, in which the caecum is mobile and there are ordinarily no adhesions, excision is the operation of choice.

**Discussion.** Dr. G. W. W. Brewster. In looking over the records of the Massachusetts Hospital for the last thirteen years, under the diagnosis of intestinal tuberculosis I found eighty-three cases. Of these the histories showed twelve could be classed as ileo-caecal tuberculosis. Seven occurred in young people between the ages of twenty and thirty; five between the ages of fifty and sixty. In four cases the preoperative diagnosis of chronic appendicitis was made. In the five cases between the ages of



fifty and sixty years of age, three were diagnosed as malignant disease. In all cases there was a tumor felt in the caecal region before operation. I refer to these cases to show that the disease occurs with considerable frequency.

Abstracted from the Boston Medical and Surgical Journal, February 22, 1917.

Fred J. Wilkiemeyer.

#### VAGINAL DELIVERY AFTER CAESAREAN SECTION.

By Nathanael R. Mason, M. D., Boston

A series of experiments was made in 1910 by the writer and Dr. John T. Williams, on pregnant cats and guinea pigs, to determine the relative strength of scar and uterine wall. These results confirmed the clinical observations of Schauta, who says that with modern closure of the wound rupture will more likely occur outside the scar.

The object of this paper is to point out that the patient who has had a caesarean section properly done, for some cause other than a pelvic indication, may with safety, as far as the caesarean scar is concerned, be subjected to future pregnancy, provided her convalescence has been a febrile and free from uterine infection.

Among the various men interviewed concerning this important question, Dr. Brodhead of New York sees no contra-indication to the above dictum. Dr. Palmer Findley expresses himself in the following words: "I confess at the outset to have entertained a prejudice in favor of repeated caesarean section in all cases to forestall a possible rupture, but as the work developed in my library I was led to conclude that such a position is untenable." Dr. Frank Konrad states that Professor Kronig of the University Frauenklinik at Freiburg teaches that the patient may with safety in a subsequent pregnancy be allowed to pass into labor and be delivered by the vaginal route. Dr. DeLee, in reviewing an earlier article by Dr. Williams, states he has delivered safely more than eight women who had previous sections.

Among the aids suggested to secure a firm scar is to allow labor to be well established before the operation is performed, "the scar will be thicker and stronger if the closing sutures are applied to a uterine wall thickened by several hours of contractions, than when placed in the thin, comparatively flabby wall of a uterus incised before labor has begun." The longitudinal fundal incision is likely to give the best results from the standpoint of future strength of the scar. The muscular development of the uterus is greatest high on the body. The principles of Sanger should be carried out, i. e., the layer method of suture, sutures closely placed which include the entire uterine muscle, but avoid the decidua, the rolling in of the peritoneal coat and tying the sutures firmly with three knots. Place a deep suture through the uterine musculature, both above the upper angle and above the lower angle of the wound, because at these points splints in the musculature frequently occur in the extraction of the child.

The operation of caesarean section has been performed 393 times at the Boston Lying-In Hospital. Of these operations, 106 have been repeated sections. The 196 were performed on 73 women; that is, second sections were done on 49, third sections on 19, fourth sections on 3, fifth sections on 2, and a sixth on 1. (It is worthy of note, from a moral point, that the staff of the Lying-In Hospital does not interfere with the tubes and ovaries of its section patients.)

The writer cites 31 cases, confined to the community of Boston, in order to be certain of their authenticity and likewise to call attention to the fact that these are occurring not infrequently with satisfactory results. Case two is worthy of citation. S. H. ———, a colored primipara of 16, had a first caesarean section for a justo-minor pelvis performed at the Boston Lying-In Hospital on Feb. 5, 1898. The operation was performed after 19 hours of labor, the patient being fully dilated and with ruptured membranes. A septic convalescence followed, in the course of which the entire abdominal wound broke down. She has had five sections since that time, one of which was a twin birth. Some of the incisions have been in the lower abdomen starting from just above the symphysis pubis. Such extensive adhesions formed after the first operation that the five subsequent ones have been extra-peritoneal. At the last operation, the sixth section on October 14, 1916, Dr. Torbert found an area in the lower third of the scar of the size of the palm of the hand, close to the bladder, covered only by peritoneum. A careful plastic has placed this patient, we trust, in a position to hold the record of the world for caesarean section."

Abstracted from the Boston Medical and Surgical Journal, January 25, 1917.

Fred J. Wilkiemeyer.

#### ACUTE SYPHILITIC MENINGITIS.

By Boris Bronstein, M. D., Odessa, Russia.

Bronstein considers that the term acute syphilitic meningitis should be more particularly applied to acute meningeal phenomena of the secondary period, sometimes preceding, but more frequently accompanying the cutaneous manifestations of this period. The pathology is essentially a meningovascularitis with hypersecretion of the cerebrospinal fluid. Prodromal symptoms, such as headache and insomnia, may or may not occur. Acute syphilitic meningitis at its height, as Bronstein says in the December International Clinics, presents the clinical picture of the tubercular form, differing from the latter by the indistinctness of the symptoms, such as contractures and stiffness of the neck, and by the absence of any marked disturbance of the pulse and respiration. In the luetic form fever is apt to be absent and there may be remissions and relapses. Lumbar puncture reveals a considerable hyperten-



sion of the cerebrospinal fluid, albumin in quantity, and a marked lymphocytosis with plasmoglia. The cerebrospinal fluid may yield a positive Wassermann even when the blood serum is negative. Other manifestations of syphilis are to be looked for. The immediate prognosis is rarely fatal but the ultimate prognosis should be reserved. Prophylactic treatment is recommended whenever the cerebrospinal fluid shows a lymphocytosis, even when all meningeal symptoms are wanting. The treatment consists in frequently repeated removal of the cerebrospinal fluid in considerable amount, combined with intravenous injection of cyanide of mercury and intraspinal injections of colloidal mercury. Neosalvarsan or salvarsan have a much more rapid action, but must be prudently handled in neurologic lesions of syphilis.

### THE CARREL METHOD OF WOUND TREATMENT.

The disinfection of war wounds by the Carrel method as carried out in an ambulance at the front in the present war is described by H. H. M. Lyle, New York (*Journal A. M. A.*, Jan. 13, 1917). The basis of the treatment is the sterilization of the wound by a suitable antiseptic reaching every portion in a sufficient concentration for a period long enough to destroy the infecting micro-organisms. The chemical destruction of the micro-organisms depends on the difference of the resistance existing between the tissues involved and the bacteria. The Carrel method enables us to secure this. The antiseptic employed is Dakin's sodium hypochlorite, 0.5 per cent. It is an ideal isotonic wound antiseptic of high bactericidal activity and low toxic or irritating quality. The latter feature distinguishes it from Javelle water, Labarraque's solution, etc. The commercial hypochlorites are of inconstant composition, and generally contain free alkali or free chlorine. They are therefore irritating and not to be used. Dakin's solution properly made has the great advantage of being able to dissolve pus, old tissue debris and blood clots, while the living tissues resist. The thoroughness of the first surgical aid is most important, and it should consist in a thorough, mechanical disinfection and cleansing from all dirt and foreign substances. The operative field is painted with tincture of iodine, and bruised and necrotic skin edges trimmed away with a sharp knife, which is then laid aside. Fresh instruments are then used to lay the wound open like a book, and it is gently explored for shell fragments and clothing shreds, etc. Gentleness of manipulation is the keystone of the technic, and any rough handling or bruising is a crime. To avoid overlooking blood stained and encrusted debris, fragments of bone, etc., the same minute and careful technic is used in bone wounds as in the soft parts. A careful revision of the wound is made and particular attention given to perfect hemostasis, which is necessary with Dakin's solution, which has the power of dissolving blood clots. Next the instillation tubes are placed in the wound so that the liquid will come in contact with every portion. A thin layer of gauze is placed over the wound and around this the required number of tubes, secured to the wound edges by a rubber cuff and suture, or a two-way tube is used. Details are given by Lyle as to the necessary placing of the tubes. In the simple type of penetrating wounds a tube without lateral perforations is introduced to the depth of the cavity and the solution allowed to well up from the bottom. In a large tract terminating in a cavity with irregular collapsible walls, a little gauze is introduced to support the walls of the cavity and allow a more thorough penetration of the fluid. Penetrating wounds with the point of entrance in a dependent position (as the buttock, posterior surface of the extremities, and the back) are treated with perforated tubes dressed with toweling. These dressed tubes keep the antiseptic in contact with the wound. A suitable nonperforated tube can also be used. In through and through wounds, a perforated tube with the tied extremity uppermost is passed from the lower to the upper wound. The liquid, escaping through the small lateral holes, flows back along the tract to the inferior orifice, moistening the entire wound. Wounds of the hand or foot, open amputation stumps, etc., are immersed in Dakin's solution for from ten to fifteen minutes every two hours until the wound is sterilized. The skin is protected by smearing it with sterile yellow petrolatum. The gloved hands are never allowed to come in contact with the wound in dressing. The instillations of the fluid are made every two hours by releasing the adjustable clamp controlling the flow, the amount being governed by the needs of the case. When the wound has become sterile the tubes are removed and the compress, moistened and Dakin's solution, applied. Formerly a continuous instillation was used. Once a day or oftener careful inspection of the wound and dressings and flow is made. Flushing the wound shows if the solution is being delivered as planned, but there is not a continuous irrigation, only a mechanical attempt to deliver a definite chemical antiseptic to every portion and to insure its contact for a prolonged period. To protect the skin from the liquid, gauze impregnated with yellow petrolatum is applied to the skin surfaces below the wound. Regular determination of the number of microbes on the wound surfaces is made by transferring on a standard loop a portion of the secretion to a slide and a count of the number of microbes in the field every second day, record being made. Absence of microbes from the wound for three successive days is considered to indicate sterilization of the wound. It is best to begin the bacterial chart one or two days after reception of the patient. Wounds of the soft parts are sterilized in from five to eight days, while greatly traumatized wounds and fractures require a considerably longer period. All bone sequestrums must be of course, removed. When the wound has been shown sterile for three days it is closed by careful layer sutures, and for extensive wounds traction strips are used. Details of the routine method at Hospital B, American Ambulance, are given, and the results of the Carrel method were most favorable. The immediate complications become rarer and suppuration almost entirely disappeared. Lyle's summary is given as follows: "The Carrel method is not a continuous irrigation. It is not dependent on the miraculous power of an antiseptic, or on any one feature of the method, but on the combination of the whole. It is a method of sterilizing wounds by mechanically delivering an antiseptic of definite chemical concentration to every portion of a surgically prepared wound and insuring its constant contact for a prolonged period. The progress of the sterilization is rigorously controlled by the microscope. Gentleness,

thoroughness, and attention to detail are essential for success. I firmly believe that the adoption of this method is destined to save many lives, to reduce the gravity of the mutilations, and allow the rapid return to the front of many men who would otherwise be lost to the service of their country."—The article is illustrated.

## PERSONAL AND GENERAL NEWS

**Dr. P. B. Myers** has moved from Lokeba to Apache.

**Dr. J. R. Preston** has moved from Adair to Welcetka.

**Dr. J. A. Walker**, Shawnee, recently lost his Ford by theft.

**Dr. W. B. Hudson**, Yale, is visiting the New Orleans clinics.

**Dr. W. L. Kendall**, Enid, is doing special work in New York.

**Dr. J. J. Barber**, Laverne, has been seriously ill for some time.

**Dr. L. T. Lancaster**, Cherokee, is attending the Chicago clinics.

**Dr. J. Worth Gray** has been appointed health officer of Quinton.

**Drs. M. L. Lewis and W. D. Faust**, Ada, have formed a partnership.

**Dr. E. J. Wolff**, Waukomis, returned from his New Orleans trip March 1.

**Dr. John R. Collins** has been appointed county physician of Nowata county.

**Dr. C. L. Hill**, Haskell, has returned from a visit to the New Orleans Polyclinic.

**Dr. W. H. Jones**, Willard, has been appointed on the insanity board of Harper County.

**Drs. M. C. McNew and J. A. Dean** of Ada attended the Chicago Polyclinic in February.

**Dr. T. F. Harrison**, Wewoka, attended the inaugural ceremonies in Washington, March 4.

**Dr. O. S. Somerville**, Bartlesville, has been appointed county physician of Washington county.

**Dr. F. B. Sorgatz**, Oklahoma City, has returned from service on the border and resumed his work at the old stand.

**Dr. J. S. McFaddin**, Hollis, was badly bruised when his car turned over near that city. The accident almost ruined the car.

**Dr. A. C. Hirschfeld** has resumed his work in Oklahoma City after eight months service with the medical corps on the border.

**Seniors of the Medical Department** of the University have offered their services to the President in the event of war with Germany.

**Dr. Frank Woolard**, Welch, received a broken arm and other injuries when the car he was in rolled over an embankment near Coffeyville.

**Dr. Arthur Nunnery**, Roosevelt, received painful injuries when he was thrown through the windshield of a car which skidded into an embankment.

**Dr. John S. Stultz**, Olustee, was accidentally shot recently while driving along a country road. The bullet, 22 calibre, entering the face and passing through the cheek.

**Dr. George C. Bolend**, father of Drs. Floyd and Rex Bolend, Oklahoma City, recently died in Sulphur. For several years Dr. Bolend was superintendent of the Norman Asylum.

**Drs. L. H. Buxton**, E. S. Lain, R. E. Looney and A. D. Young have been appointed a lecturing staff by Oklahoma county society to instruct a class in home nursing in the high school.

**Dr. M. O. Moore**, a well known physician of Spiro, died in two hours after his car overturned between Poteau and Spiro, on the 6th. Mrs. Moore, who was in the car, escaped with few injuries. Burial was held at Spiro, March 8.

**Dr. C. E. Frost**, a well known physician of Duncan, recently died in Chickasha. Dr. Frost was 66 at the time of death and leaves a wife and three daughters. He was universally loved for his many good qualities and his geniality and kindness.

**Frank S. Betz Company**, Chicago, have just issued a handsome booklet and catalogue illustrating their line of hospital furniture and equipment. Our readers should certainly ask for that issue if they are interested in furnishing or refitting their institutions.

**Dr. Ralph V. Smith**, Tulsa, secretary of the State Board of Medical Examiners was recently severely injured on lifting himself from under his machine. Dr. Smith received a severe injury about the spinal ligaments which his physicians report will likely incapacitate him for a long time.

**Dr. D. D. Howell**, Nowata, is still pursued by his "jinx." His latest misfortune of several in the past eighteen months resulted from a taxi-cab in which he was a passenger in Coffeyville being struck and overturned by a passing car. He was generally bruised and cut by flying glass and will be confined to bed for a long time.

**Senators Buckner** of McAlester and Snyder of Oklahoma City so aroused the ire of some of the Chiropractic "scientists" that they rushed to the advertising columns, double ones, to bolster up their losing cause. Limited space prohibits reproduction of the laughable mess, ignorantly written, void of logic and sense, which these "doctors" hurled at the senators who were unfeelingly caustic in their criticism of the struggling healers.

**Dr. C. S. Wilkison**, Roff, is doing special work in New Orleans.

**Dr. Chas. T. Schrader**, Bristow, is a candidate for Mayor in that city.

**Dr. J. W. Echols**, McAlester, is a candidate for the office of School Board.

**Dr. M. W. Buchanan**, Watonga, is doing special work in the clinics of New Orleans.

**Dr. F. E. Sadler**, Coalgate, has been appointed County Superintendent of Health of Coal County.

**Dr. Pauline Barker**, Guthrie, is reported as recovering nicely from an operation undergone in that city recently.

**Dr. Leigh Watson**, formerly of Oklahoma City, has been given a place in the surgical department of Rush Medical.

**Drs. W. D. Faust and J. G. Breco**, Ada, accompanied by their wives, are visiting New Orleans and attending Tulane.

**Dr. C. E. Martin**, Wagoner, easily won the \$10,000 malpractice suit brought against him for allegedly setting a broken arm.

**Dr. D. A. Gregory**, formerly of Nashville, Tennessee, has moved to Ardmore and has associated himself with Dr. Walter Hardy.

**Dr. and Mrs. W. W. Rucks**, Guthrie, are making an extended visit in New York and New Orleans where Dr. Rucks will look into the clinics.

**Dr. M. E. Stout**, Oklahoma City, while in the operating room of a hospital had his clothes rifled. He lost a diamond ring, watch and some money.

**Dr. J. H. Hansen**, a widely known and respected physician of Grandfield, died March 12 from pneumonia. Dr. Hansen had lived a long and useful life. He was born in Copenhagen in 1847 and came to America at the age of ten. During his youth he served in the army in many Indian expeditions. He left a wife and six children.

**Medical Department**, students, faculty and friends held a jollification at the hospital building in Oklahoma City after the \$200,000.00 appropriation bill for a new hospital passed the legislature. Addresses were made by the Dean, Dr. LeRoy Long, several members of the faculty and also by Dr. John W. Duke, State Commissioner of Health.

**The Muskogee Academy of Medicine** gave its annual banquet, March 20. The distinguished lay guests and speakers of the evening were Honorables Tams Bixby, Editor of the Muskogee Phoenix, and D. N. Fink of the Commercial National Bank and Messers N. A. Gibson, Edgar A. DeMeules and Grant Foreman. The medical guest of honor was Dr. L. S. Willour, McAlester, the president, Dr. C. W. Heitzman, presiding and acting as toastmaster.

**Dr. W. E. Wright**, Tulsa, threw open the doors of his newly finished and splendidly equipped laboratory and was host to the Tulsa County Medical Society, March 19. The entertainment consisted of a stereopticon demonstration of X-ray work and bacteriological slides. A splendid feature of the occasion was a motion picture demonstration of Lewisohn, in blood transfusion, and Albee of an inlay bone graft for ununited tibia. After this Dr. Wright and the staff served a splendid refreshment course. About fifty physicians were present. Without any desire to flatter the management of the Walter E. Wright Laboratory, we suggest that every physician in passing through Tulsa who has the time, visit this institution. It is not an exaggeration to say that this plant in its entirety has few equals anywhere in the United States.

## CORRESPONDENCE

Oklahoma City, Feb. 8, 1917.

Dr. C. A. Thompson, Secretary,  
Oklahoma State Medical Association,  
Muskogee, Okla.

Dear Doctor:

I desire to call to your attention, and to the physicians throughout the state, that the Opticians or Optometrists, as they are pleased to call themselves, are fighting Senate Bill No. 111, which is the measure the physicians want the present legislature to pass. It was not the intention of this bill to effect them nor would it do so, so long as they do not attempt to treat disease which is entirely out of their province.

I am sending you a copy of the Oklahoma City Pointer and call your attention to the marked article. It is a slight demonstration of what this class of charlatans are doing in this as in other states. In my opinion they are the most dangerous of all quacks. In their advertisements they offer to cure headaches, chorea, strabismus, etc., and many of them have signs as eye, ear, nose and throat specialists.

It is the custom of some physicians to share their offices with an optician. They had just as well have a Chiro or any other quack to which they give recognition. We can not hope to stop quackery so long as we foster it in its worst form.



## WOMAN IN SUIT MAKES FRAUD CLAIM.

Alleging that she was defrauded of \$177.50 through conspiracy, Alice M. Motter has brought suit before E. B. Bradshaw, justice of the peace, against C. Fred Coffman of this city for the recovery of the money. The plaintiff asserts that a man was introduced to her as Dr. H. Miller of Chicago, by Coffman. The woman said she had been suffering somewhat with her eyes and the men examining them told her she was blind in one eye and would lose the other if something was not done for it.

The woman alleges that she was led to believe her condition serious and in submitting to what she thought was treatment for her eye trouble, she was required to give up the \$177.50 for which she alleges she received nothing but a pair of glasses. She alleges that after she gave up her money the man introduced to her as Miller left the country. She alleges that she was also told that she had heart trouble, but that she believes every representation made to her was false.

Respectfully submitted,

W. T. Salmon, Secretary,  
State Medical Legislative Committee.

Philadelphia, February 15th, 1917.

Dr. C. A. Thompson,  
507 Barnes Building,  
Muskogee, Okla.

Dear Dr. Thompson:

I beg to acknowledge receipt of your letter of recent date in which you make inquiry as to whether the Dermatological Research Laboratories will again furnish arsenobenzol. The severance of diplomatic negotiations with Germany does not affect the status in the United States of the patents of German citizens. Neither would a declaration of war suspend the patents without specific legislation on the part of Congress setting aside the patents of citizens of belligerent countries, or conferring upon the Commissioner of patents the authorization to do so.

If a state of war should exist between the United States and Germany and Congress take the action referred to, our laboratories would, I believe, possess or acquire the right to make and distribute arsenobenzol, and our laboratories will be in a state of preparation for such a contingency should it arise.

If peace be preserved between the United States and Germany, and the supply of salvarsan become exhausted, I have every reason to believe that our laboratories will be brought into requisition to make arsenobenzol. The manner of distribution will be a matter to be determined by conference between us and the Farbwerke-Hoechst Company of New York City, the owners of the American rights. Were we to attempt to supply arsenobenzol now, a suit for infringement of patent rights would be instituted against us.

I beg to remain,

Very truly yours,

Jay Frank Sehanberg, Director.

## CABOT, CHIROPRACTIC AND DIAGNOSIS.

Boston, March 13, 1917.

Dear Dr. Thompson:

I fear this letter may come too late as I have been away much since you wrote me.

The pamphlet which you enclose me, written by the Oklahoma State Association of Doctors of Chiropractic, gives on pages 8, 9 and 10 a wholly unfair impression of what I have stated in relation to mistakes in diagnosis. The cases referred to in my article were all of them seen in hospitals, many of them coming to the hospital in a moribund state and dying within a few hours, so that diagnosis was very difficult, if not impossible. I included all of these cases in order to be fair, but if I had included only cases studied for a period of a week or so, as cases are ordinarily studied outside hospitals, the percentage of results would have been far better. Whatever our shortcomings in this respect, we certainly have at least attempted to make a diagnosis and in many cases succeeded. Chiropractors, so far as I have seen their practice, do not even attempt diagnosis and have no considerable knowledge of its methods. They cannot, therefore, make any wrong diagnosis or any right ones, either. The quotation from the Boston Post of June 1, 1916, quoted on page 10 of this pamphlet, is one which I repudiated at the time it was printed. It contains statements which I never said. To give chiropractors any of the rights under the laws now enjoyed by trained physicians would certainly be a long step backwards in the evolution of medicine out of quackery.

Yours sincerely,

Richard C. Cabot.

Philadelphia, February 28, 1917.

To the Editor of the Journal  
of the Oklahoma State Medical Association.

Dear Sir:

The second examination to be given by the National Board of Medical Examiners will be held in Washington, D. C., June 13, 1917. The examination will last about one week.

The following states will recognize the certificate of the National Board: Colorado, Delaware, Idaho, Iowa, Kentucky, Maryland, North Carolina, New Hampshire, North Dakota and Pennsylvania. Favorable legislation is now pending in twelve of the remaining states.

A successful applicant may enter the Reserve Corps of either the Army or Navy without further professional examination, if their examination papers are satisfactory to a Board of Examiners of these services.

The certificate of the National Board will be accepted as qualification for admittance into the Graduate School of the University of Minnesota, including the Mayo Foundation.

Application blanks and further information may be obtained from the Secretary, Dr. J. S. Rodman, 2106 Walnut Street, Philadelphia.

We will appreciate a notice of this coming examination in your Journal.

Very truly yours,

J. S. Rodman, Secretary.

## MISCELLANEOUS

### TREATMENT OF IVY POISONING.

Studies of rhus toxicodendron show that its poisonous principle is a volatile acid resin; therefore, the treatment of rhus poisoning with an alkali is theoretically right. In practice the correctness of the theory is borne out; a saturated aqueous solution of sodium bicarbonate being one of the most efficacious remedies. Recently a note was made in these columns of the application of ice water for rhus poisoning in the United States Army with good results. The possibility of combining the alkaline and ice water treatments naturally suggests itself, and upon trial this has been found to be prompt and efficacious. In two cases which have come to our notice a saturated solution of sodium bicarbonate in ice water applied freely and continuously to the infected area brought about prompt relief and a complete cure within twelve hours. In view of the suffering entailed by a severe attack of rhus poisoning and of the failure of the older method of the treatment with opium and lead water, grindelia, etc., it is well to bear in mind this method, which is easy of application and prompt in affording relief.—*New York Medical Journal*.

### COMMON SENSE AND CONSUMPTION.

A sanatorium superintendent says: "Doctors would make fewer errors in diagnosis if they depended more on symptoms, and placed less reliance on the physical signs that may be present. Physical signs without symptoms can usually be ignored. Symptoms, however, with or without physical signs, need careful study." In some cases we should make a positive diagnosis on the history and constitutional signs alone, without signs in the lungs. Such cases are not uncommon. Likewise, but rather less often, one can safely make a positive diagnosis on lung signs alone without marked constitutional disturbances. In the vast majority of cases there should be present both signs in the lungs, generally including rales at some time or other, and constitutional signs, such as fever, rapid pulse, subnormal temperature, loss of weight and strength. A hemorrhage, not including minute streaks or flecks of blood in the sputum, always means Tb. until the contrary is proven. This rarely happens. It need not always mean, however, that the patient should give up his work for a long time and go to a sanatorium. The X-ray gives confirmatory evidence which is rarely of great value in diagnosis when taken by itself. Tuberculin tests are of little value and may do harm. Observations of temperature and pulse are very valuable. The most important evidence, and probably the most neglected, is that obtained from a careful and detailed study of the patient, his family history, habits, surroundings and occupation. From the patient's point of view it is better to be safe than sorry, better to undergo a few weeks or months, perhaps, unnecessary treatment as a "lunger" than to linger along in false security until the chances of cure are gone.—*Common Sense and Consumption*, J. B. Hawes, 2nd, *Boston Medical and Surgical Journal*, July 27, 1916.

### THE NATIONAL FREE TUBERCULAR SANATORIUM ASSOCIATION.

So many inquiries have been coming lately to The National Association for the Study and Prevention of Tuberculosis from all quarters, chiefly from anti-tuberculosis associations and State boards of health with reference to the National Free Tubercular Sanatorium Association, that a preliminary statement with regard to this organization is being published in this number of the Bulletin.

The National Free Tubercular Sanatorium Association appears to be an outgrowth or later development of the National Tubercular Sanitarium Association of San Antonio, Texas. The present organization has its headquarters at Alamogordo, New Mexico. The National Tubercular Sanitarium Association of San Antonio was originally chartered under the Laws of Texas on September 30, 1914, as the National Masonic Tubercular Sanatorium. Its object was, according to its charter, to provide a tuberculosis sanatorium near San Antonio for Masons who were afflicted with tuberculosis. The Grand Lodge of Texas ruled in December, 1914, that the use of the word "Masonic" by a corporation such as this was

not justifiable and the corporation was compelled to drop the word and in December, 1914, re-incorporated under the name given above, the National Tubercular Sanitarium Association of San Antonio. According to a printed statement of this organization issued in December, 1915, the officers of the organization were as follows: President, C. A. Soule; Vice-President, Conn L. Milburn; Secretary, Luther I. Powell; Treasurer, H. W. Hamilton; Business Manager, C. S. Goodwin, and General Counsel, A. W. Houston.

During the early period of its operations, this organization had secured a certain amount of support from members of the Chamber of Commerce of San Antonio and from other prominent business men of that city. Most of this support, according to copies of letters on file in the office of The National Association for the Study and Prevention of Tuberculosis, was secured on the strength of statements made by the original promoters of the organization that the institution was to be "Masonic" in character and to be exclusively for Masons. After the Grand Lodge had disavowed the use of the word "Masonic," the support of the San Antonio people waned and later changed to practical antagonism to the extent that a theatrical benefit which was planned for the organization in January was eventually called off, due to the hostile attitude of the Chamber of Commerce. As a result of this action, the secretary of the National Tubercular Sanitarium Association, Luther I. Powell, requested the Chamber of Commerce of San Antonio to reimburse them for the loss which it had sustained, amounting to something like Five Thousand Dollars and stated that if this were not done the Association would move its headquarters to some New Mexico city. The National Association for the Study and Prevention of Tuberculosis is not in position to state whether the promoters of this organization were reimbursed by the San Antonio Chamber of Commerce or not.

In any case, the two original promoters of the San Antonio organization, Mr. Luther I. Powell and Mr. C. S. Goodwin, appear to have interested the Alamogordo Commercial Club and people in Alamogordo in a revised form of the original association, and within the last few months announcements have been circulated extensively throughout the country relative to a new association called the National Free Tubercular Sanatorium Association. The officers of this organization are as follows: President, C. F. Pearce; Vice-President, C. S. Goodwin; Secretary, L. I. Powell, and Treasurer, Geo. H. Healy. It will be noted that Messrs. Goodwin and Powell appear in official capacity in the organization. the same as they did in the one at San Antonio.

According to a letter from Mr. Powell, on file in the office of The National Association for the Study and Prevention of Tuberculosis, The National Tubercular Sanitarium Association of San Antonio on January 20, 1915, had received subscriptions "in the neighborhood of \$4500." How much of this money had actually been paid cannot be ascertained. What was done with it is another matter which cannot be ascertained. One thing is sure, that no sanatorium did develop at San Antonio, although the promoters claimed in a letter to The National Association for the Study and Prevention of Tuberculosis that they had purchased a site near that city. It later developed that they had secured an option upon the site, and they claimed to the Chamber of Commerce that they were obliged to pay \$1500 to retain their option.

The San Antonio organization raised this money by advertising in the newspapers, by circular letters and by having agents travel through Texas and elsewhere selling so-called "peace stamps." According to the statement of Mr. Powell, the money was raised largely on a commission basis, the solicitors receiving "twenty-five per cent. on the smaller amounts and as low as one and a half per cent. on the larger amounts."

As to the present organization, it also appears to be receiving its money by solicitors and by advertising. Apparently a newspaper advertising campaign is being carried on among the smaller newspapers of the country. Letters are being circulated to prominent medical men and members of boards of health asking them to serve on the National Medical Board of the National Free Tubercular Sanatorium Association. According to a letterhead used on a letter dated August 31st, 1916, the four members of the National Medical Board consisted at that time of the presidents of the California, Wyoming, Texas and Nevada State Boards of Health. In this same letter, written to a firm interested in a tuberculosis specialty, an advertisement is solicited for a booklet on tuberculosis which it is planned to circulate throughout the country. The booklet, it is stated, is to be written by "C. F. Pearce, A. M., B. D.," the president of the association. The statement does not say that C. F. Pearce is not a physician. It appears, however, that he is a minister.

As to the need for such an institution, the prospectus and advertising matter which the promoters are sending out, claims that the institution will be free for tuberculosis patients from any part of the United States and that there is great need for such an institution. Those who have followed the career of large national charitable institutions such as those at Denver will testify that the value of such institutions is, on the whole, as preventive measures in the National campaign for the prevention of tuberculosis, doubtful and that, furthermore, they tend to attract the indigent, migratory consumptive and to aggravate the problem of this class of cases, which is just now vexing the entire Southwest and is receiving consideration at the hands of the United States Congress.

The National Association for the Study and Prevention of Tuberculosis believes that there is no necessity for a national organization of this character, and that the proposed institution will not meet any real need. The organization is in no way affiliated with The National Association for the Study and Prevention of Tuberculosis, and has not received any endorsement from the latter Association.

Should it seem necessary, a further more detailed statement will be issued in a later number of the Bulletin.—Bulletin of the National Association for the Study and Prevention of Tuberculosis.



### THE CAUSE OF PELLAGRA?

That there may be an increase in pellagra during the coming year on account of the rise in the cost of food-stuffs is the fear expressed in a statement issued by the U. S. Public Health Service today. As a result of government researches it was found that pellagra is produced by an insufficient, poorly balanced diet and that it can both be prevented and cured by the use of food containing elements in the proportion required by the body. The application of this knowledge greatly reduced pellagra in 1916 as compared with previous years. This reduction is believed by experts of the Public Health Service to have been due to improved economic conditions which enabled wage-earners to provide themselves with a better and more varied diet and to a wider dissemination of the knowledge of how the disease may be prevented. It is feared, however, that pellagra may increase in 1917 by reason of an increase in food cost out of proportion to the prosperity now enjoyed by this country. The great rise in the cost of forage, particularly cotton seed meal and hulls, is causing the people in many localities to sell their cows and thus there is danger that they will deprive themselves of milk, one of the most valuable pellagra preventing foods. The high cost of living has further served to bring about a reduction in many families in the amount of meat, eggs, beans and peas consumed, all of which are pellagra prophylactics. In effecting economies of this nature the general public should bear in mind the importance of a properly balanced diet and refrain from excluding, if possible, such valuable disease preventing foods. It is believed that unless this is done there will be a greater incidence of pellagra next spring.

—U. S. Public Health Service.

### PROPAGANDA FOR REFORM.

**Glycerophosphate Comp. Ampuls, 1 cc., Squibb.**—The Council on Pharmacy and Chemistry refused recognition to Glycerophosphate Comp. Ampuls, 1 cc., Squibb, each said to contain sodium glycerophosphate 0.1 gm., strychnin cacodylate 0.0005 gm., and iron cacodylate 0.01 gm., because the name did not indicate the potent ingredients and because the administration of a mixture of sodium glycerophosphate, strychnin, cacodylate and iron cacodylate is irrational. In recognition of the Council's conclusion, Squibb and Sons state that the sale of the ampules has been discontinued. This cooperation in the work of the Council on Pharmacy and Chemistry is gratifying. (*Journal A. M. A.*, Feb. 3, 1917, p. 388).

**Emetine in Dysentery and Pyorrhea.**—Emetine is accepted today as an almost ideal specific against amebic dysentery. Experience indicates that by its use abscess of the liver can be prevented and even cured. When a differential diagnosis between amebic and bacillary dysentery cannot be made, emetine may be of diagnostic value because improvement follows from its use if the case is amebic. In neglected cases and some other forms of the disease the emetine treatment may fail of complete success. As a direct cure for pyorrhea emetine seems to have failed, not because it does not act on the ameba which are found in the pyorrheal pockets but because pyorrhea is not caused by ameba. (*Journal A. M. A.*, Feb. 3, 1917, p. 374).

**The Phenolsulphonephthalein Test.**—It has been assumed that excretion of less than 60 to 80 per cent of phenolsulphonephthalein in two hours is an indication of renal insufficiency. It has been found, however, that in certain experimental conditions, phenolsulphonephthalein may be destroyed in the body and therefore not appear in the urine although the kidneys function normally. If this condition is found to occur in clinical cases the interpretation of the tests may have to be limited to this: an excretion of 60 to 80 per cent., i. e., a positive result, within two hours after the injection of the phenolsulphonephthalein is evidence of satisfactory renal activity. (*Journal A. M. A.*, Feb. 3, 1917, p. 379).

**The Willard Pyorrhea Treatment.**—After defrauding the public of amounts estimated by the federal investigators at \$75,000 a year by means of a fake cure for pyorrhea, F. W. Willard, M. D., D. D. S., has been denied the use of the United States mails. The business of the Willard concern, apparently owned by Oren Oneal, consisted of a mail-order plan of a so-called home treatment for pyorrhea or Riggs' disease. (*Journal A. M. A.*, Feb. 10, 1917, p. 477).

**Sargol.**—The case of the United States against Wylie B. Jones and H. E. Woodward, proprietors of "Sargol," came to an end Jan. 30, 1917, after a trial lasting thirteen weeks. Jones was fined \$20,000 and Woodward was fined \$10,000. Sargol was a nostrum of the get-fat-quick variety; as an alleged "flesh builder" it was advertised extensively and intensively by its exploiters. (*Journal A. M. A.*, Feb. 3, 1917, p. 381; Feb. 10, 1917, p. 463; Feb. 24, 1917, p. 642).

**Fate of Trypsin in the Stomach.**—Judging by recent experiments, it appears that the proteolytic enzyme of the pancreas isolated as trypsin is capable of withstanding a rather long digestion in presence of hydrochloric acid and pepsin provided that sufficient protein is present to combine with all or a part of the acid and so bring the free acid down to a certain level. From the observations it seems possible that some tryptic digestion may occur within the stomach when the free acid is low from combination with protein. The results do not, however, even remotely suggest that the administration of a few grains of the various commercial products claimed to contain trypsin or pancreatin would have the slightest therapeutic significance. (*Journal A. M. A.*, Feb. 17, 1917, p. 554).

**Firwein.**—The Council on Pharmacy and Chemistry reports that Firwein (The Tilden Co.) is sold under the claim that when swallowed it has a "predilection" both for the bronchial mucosa and also for the genito-urinary organs. The Council finds that little information is given in regard to the composition of Firwein. As the composition of Firwein is secret, the therapeutic claims unwarranted and its use irrational, the Council declared it inadmissible to New and Non-official Remedies. (*Journal A. M. A.*, Feb. 17, 1917, p. 564).

**Firoylptol Plain and Firoylptol with Kreosote.**—The Council on Pharmacy and Chemistry reports that Firoylptol (The Tilden Company) is said to be composed of eucalyptol 10 drops, cottonseed oil 1-2 ounce and Firwein enough to make 1 ounce, and that, as the composition of Firwein is secret, the composition of Firoylptol is also unknown except to the manufacturers. Firoylptol with Kreosote is said to contain, in addition to whatever may be the component parts of Firoylptol, 10 minims of creosote to each ounce. The advertisements for these two preparations seem to have for their key-note the assertion that cottonseed oil is a particularly valuable nutriment and that when combined with the constituents of Firoylptol and Firoylptol with Kreosote it becomes particularly valuable to the tuberculous. The Council discussed the extravagant claims made for these proprietaries; reminds that food and fresh air, not drugs, constitute the fundamentals of the treatment of tuberculosis; and finds that neither of the products is acceptable for New and Non-official Remedies. (*Journal A. M. A.*, Feb. 17, 1917, p. 564).

**More Misbranded Nostrums.**—The following "patent medicines" were found misbranded under the U. S. Food and Drugs Act chiefly because false and fraudulent therapeutic claims were made for them: Collins' Ague Remedy, admittedly containing 33 1-3 per cent alcohol. Swain's Panacea containing nearly 5 per cent alcohol, 58.5 per cent sugar, 0.1 per cent salicylic acid and some sarsaparilla. Swayne's Panacea, essentially the same as Swain's Panacea in composition. Croxone, capsules containing a white pill and a red oil; the oil was oil of pine or oil of juniper dissolved in a fatty oil, while the pill consisted essentially of strychnine, a trace of brucine, aloin; hexamethylenamin, lithium carbonate, potassium nitrate and probably a trace of atropin. Freeman's Balsam of Fir Wafers, lozenges consisting of sugar with very small amounts of oil of turpentine and eucalyptus with the possible presence of balsam of fir. Renne's Pain Killing Oil, essentially a water-alcohol solution of sassafras oil and cayenne pepper containing 78.6 per cent alcohol and 4 per cent volatile oils and possibly a little mustard oil and soap. Schuh's Yellow Injection, an aqueous solution of boric acid, carbolic acid and berberin. Schuh's White Mixture, a mixture of mucilage of tragacanth, balsam of copaiba, and probably sandalwood oil, flavored with cassia. Elmore's Rheumatic Goutaline, apparently a dilute tincture of colchicum. Armstrong's Croup Ointment, containing eucalyptus and traces of other oils, possibly cassia and thyme. Anticephalalgine, containing 30 per cent alcohol and 4 grains acetanilid to the ounce, sodium bromid, sodium salicylate, caffeine and antipyrin. Wright's Rheumatic Remedy, an emulsion composed principally of turpentine, methyl salicylate, sugar, acacia, and water, with probably some resinous or plant extractive matter. H. G. C., a watery solution of borax and berberin sulphate. Russell's White Drops, containing 13 to 16 per cent of alcohol as well as codein. Pneumovita, a sweetened gum, containing small amounts of charcoal and iron phosphate having a wintergreen flavor. Mecca Compound, an ointment containing carbolic acid, camphor, borates, zinc compound, sodium soap in a soft, paraffin base. Best Cough Remedy, a sparmint syrup containing alcohol, chloroform and morphin. Stella-Vita, a female weakness remedy. Vegetable Pulmonary Balsam, a syrup flavored with sparmint, sassafras, containing alcohol and opium. (*Journal A. M. A.*, Feb. 17, 1917, p. 565 to 566; Feb. 24, 1917, p. 651).

**Biniodol.**—The Council on Pharmacy and Chemistry reports that Biniodol is claimed by the manufacturer, Charles C. Yarbrough, Memphis, Tenn., to be a solution of 1 per cent mercuric iodid and 2.75 per cent guaiacol in a vegetable oil and that it is marketed with the implication that it is new and superior to other oil solutions of mercuric iodid. The Council found that the claims of novelty and of superiority were not substantiated by the evidence. Clinical investigation did not demonstrate the effects of Biniodol to be different from those of solutions prepared in the A. M. A. Chemical Laboratory, with and without guaiacol. The Council declared Biniodol inadmissible to New and Non-official Remedies because claims of superior efficiency were not established; and because it is an unnecessary modification of an established non-proprietary article marketed under a proprietary name. (*Journal A. M. A.*, Feb. 24, 1917, p. 650).

## NEW BOOKS

### SUGGESTIVE THERAPEUTICS.

**A Handbook of Suggestive Therapeutics, Applied Hypnotism and Psychic Science**, designed especially for the practitioner of medicine, surgery and dentistry. By Henry S. Munro, M. D., Omaha, Nebraska. Fourth edition, revised and enlarged. Cloth, 481 pages, price \$5.00. C. V. Mosby Company, St. Louis, 1917.

In these days of "wonders" related at experience meetings of the Christian Scientist and similar baseless sciences it is well for every physician to be advised of the real basis of success and failure in treatment. Dr. Munro has gone into detail and cites many cases of, to the uninitiated, "wonders" in the way of cures of troubles that either were purely imaginary or the result of much self suggestion in the mind of the neurotic patient. He strips the real from the unreal, points out many common fallacies, their possibilities for growing into realities especially in the mind of the patient and, what is very worth while, indicates the cases fitted for suggestion at the hands of the physician. A perusal of this work will recall to the memory of all of us, cases which have miraculously recovered with and without treatment and the tendency in the mind of the laity to attribute cures to whatever the patient happened to be using at the time of his betterment. He stresses particularly the necessity for accurate diagnosis. The

work, well known to many in the middle west already, is worthy of a place in the library of every practitioner.

#### THE MEDICAL CLINICS OF CHICAGO.

**The Medical Clinics of Chicago.** Volume II, Number IV (January, 1917). Octavo of 231 pages, 20 illustrations. Philadelphia and London: W. B. Saunders Company. 1917. Published Bi-monthly. Price per year: Paper, \$8.00; Cloth \$12.00.

Among the very noticeable articles in this issue are: Acidosis, by Dr. Frank Wright; Achylia Gastrica, Dr. Walter Hamburger; Decomposition, Dr. Isaac Abt; Barium Diagnosis, Jas. T. Case; Pulmonary Abscess-Delayed Resolution in Pneumonia and Amebic Dysentery, Dr. Frederick Tice; Carcinoma of Rectum, Milton Portis and Purpura Hemorrhagica by Dr. Arthur F. Beisfeld.

#### THE SURGICAL CLINICS OF CHICAGO.

**The Surgical Clinics of Chicago,** Volume I, Number 1 (February, 1917). Octavo of 221 pages, 83 illustrations. Philadelphia and London: W. B. Saunders Company. 1917. Published Bi-Monthly. Price per year: Paper, \$10.00; Cloth, \$14.00.

This is a worthy companion to the Chicago Medical Clinics and successor to Murphy's Clinics. The new work will cover not only general surgery, but the specialties as well, including gynecology, genito-urinary work, eye, ear, nose and throat, recording the clinics of some 40 leading Chicago specialists. The first issue contains clinics from E. Wyllys Andrews, Carl Beck, A. D. Bevan, D. N. Eisen-drath, A. B. Kanavel, Dean Lewis, L. L. McArthur, A. J. Ochsner, D. B. Phemister, S. C. Plummer, E. W. Ryerson and Kellogg Speed.

We call attention to a suggestion of McArthur in which he has used with success coincident with gastric surgery, the plan of opening the gall bladder, and the insertion of tube for the purpose of receiving hot alkaline or other appropriate solutions. He states that post-operative vomiting, anuria and shock are promptly controlled, controlled much better than by hypodermoclysis or intramuscular infusion. Gall-stone disease, goiter, fractures, plastic surgery, hernia, nerve suture, carcinomatous ulcer, head injuries, tendoplasty, calculous anuria, ankylosis of elbow, echinococcus cyst and many other surgical conditions are considered. The book should be carefully followed not only by the surgeon, but the practitioner as well, on account of the close relation of many of the subjects.

#### PRINCIPLES OF TREATMENT OF BROKEN LIMBS.

**An Inquiry Into the Principles of Treatment of Broken Limbs.** A Philosophico-Surgical Essay with surgical notes by William F. Fluhner, M. D., Consulting Surgeon to Bellevue and Mount Sinai Hospitals. Illustrated, Cloth, 128 pages. Price, \$3.00. The Rebmman Company, New York, 1917.

This is an entertaining discussion of principles of treatment of fractures, culled evidently from the personal experiences of the author from many years service as a surgeon. The work considers especially fractures of long bones, though some space is given skull fractures, sepsis, as it existed in the early days of Bellevue, treatment of septic wound complications and stress is laid on the use of plaster and bandages supplemented by the use of perforated tin strips. The little work contains many ingenious suggestions for the application of extension and supportive and frame-work protectives in compound fractures. On reading this one immediately wishes for an opportunity to try some of the manouvers and plans on his own patients.

#### BLOOD AND URINE CHEMISTRY.

**The Newer Methods of Blood and Urine Chemistry** by R. B. H. Gradwohl, M. D., Director of the Pasteur Institute of St. Louis and the Gradwohl Biological Laboratories, St. Louis, and A. J. Blaivas, Assistant in the Same; and Sometime Technician in Pathological Chemical Laboratories, New York Post-Graduate Medical School and Hospital; and Former Assistant, Chemical Laboratory, St. Luke's Hospital, New York City. Sixty-five Illustrations and Four Color Plates, Cloth 235 pages. Price \$2.50, St. Louis, C. V. Mosby Company, 1917.

The rapid increase of interest in blood and urine chemistry prompted the preparation of this work. Certainly a knowledge of the individual case with reference to the constituents of these important body-fluids is paramount if success is to be attained in treatment of many conditions. Without a very clear conception of the conditions evidenced by proper interpretation of the necessary tests, treatment becomes the merest guess work more likely to be followed by disaster than otherwise. The authors have selected, what they believe to be the most practical tests. The selection is made, as far as may be, from the literature of recent date. The important subject of acidosis is given thorough and concise handling.



## OFFICERS OF COUNTY SOCIETIES

County	President	Secretary
Adair	J. Patton, Stilwell	A. J. Sands, Watts
Alfalfa	S. B. Growden, Cherokee	L. T. Lancaster, Cherokee
Atoka		
Beaver		
Beckham	J. E. Yarbrough, Erick	K. R. Rone, Elk City
Blaine	M. W. Buchanan, Watonga	J. A. Norris, Okeene
Bryan	J. H. Shuler, Durant	D. Armstrong, Mead
Caddo	W. T. Hawn, Binger	C. R. Hume, Anadarko
Canadian	P. F. Herod, El Reno	W. J. Muzzy, El Reno
Choctaw	V. L. Person, Boswell	E. R. Askew, Hugo
Carter	J. C. Best, Ardmore	R. H. Henry, Ardmore
Cleveland	J. M. Williams, Norman	Gayfree Ellison, Norman
Cherokee	W. B. Blake, Tahlequah	C. A. Peterson, Tahlequah
Custer	M. C. Comer, Weatherford	S. C. Davis, Clinton
Comanche	L. A. Milne, Lawton	G. Pinnell, Lawton
Coal	J. B. Clark, Coalgate	A. Cates, Tupelo
Cotton	M. T. Clark, Temple, R. R. No. 1	G. O. Wehh, Temple
Craig	C. S. Neer, Vinita	W. R. Marks, Vinita
Creek	C. D. Blachley, Drumright	H. S. Garland, Sapulpa
Dewey		
Elitis		
Garfield	W. L. Kendall, Enid	James H. Hays, Enid
Garvin	G. L. Johnson, Pauls Valley	N. H. Lindsey, Pauls Valley
Grady	E. E. Dawson, Chickasha	Martha Bledsoe, Chickasha
Grant		C. H. Lockwood, Medford
Greer	E. M. Poer, Mangum	T. J. Horsley, Mangum
Harmon		
Haskell	M. VanMatre, Keota	J. R. Waltrip, Kinta
Hughes		
Jackson	D. C. Buck, Eldorado	W. H. Rutland, Altus
Jefferson	G. C. Wilton, Ryan	J. I. Derr, Waurika
Johnson	C. B. Ballard, Mannsville	H. B. Kniseley, Tishomiugo
Kay		A. S. Risser, Blackwell
Kingfisher	C. E. Wagoner, Hennessey	Chas. W. Fisk, Kingfisher
Kiowa	Wm. McIlwain, Lonewolf	A. L. Wagoner, Hobart
Latimer		E. B. Hamilton, Wilhurton
Le Flore	J. B. Beckett, Spiro	J. J. Hardy, Poteau
Lincoln		A. M. Marshall, Chandler
Logan	A. A. West, Guthrie	E. O. Barker, Guthrie
Love		
Mayes	J. E. Hollingsworth, Strang	W. C. Bryant, Choteau
Major		
Marshall	A. E. Ballard, Madill	O. E. Wellhorn, Kington
McClain	J. W. West, Purcell	O. O. Dawson, Wayne
McCurtain		C. R. McDonald, Broken Bow
McIntosh	W. P. Lee, Checotah	Wm. A. Tolleson, Eufaula
Murray	J. A. Adams, Sulphur	W. H. Powell, Sulphur
Muskogee	I. B. Oldham, Muskogee	J. G. Nohle, Muskogee
Noble	Bruce Watson, Perry	T. F. Renfrow, Billings
Nowata	J. E. Brookshire, Nowata	J. R. Collins, Nowata
Okfuskee	H. A. May, Okemah	J. M. Pemberton, Paden
Oklahoma	L. J. Moorman, Oklahoma City	F. B. Sorgatz, Oklahoma City
Oklmulgee	N. N. Simpson, Henryetta	H. E. Breese, Henryetta
Ottawa	R. F. Von Cannon, Miami	G. P. McNaughton, Miami
Osage	J. M. Ennis, Pawhuska	Benj. Skinner, Pawhuska
Pawnee		E. T. Robinson, Pawnee
Payne	E. M. Harris, Cushing	J. B. Murphy, Stillwater
Pittsburg	J. O. Grubbs, N. McAlester	J. C. Johnston, McAlester
Pottawatomie	F. H. Scott, Shawnee	G. S. Baxter, Shawnee
Pontotoc	C. L. Orr, Ada	M. L. Lewis, Ada
Pushmataha		
Rogers	W. E. Smith, Collinsville	W. A. Howard, Chelsea
Roger Mills		
Seminole		
Sequoyah	S. B. Jones, Sallisaw	W. L. Knight, Wewoka
Stephens	E. B. Thomason, Velma	T. F. Wood, Sallisaw
Texas	W. H. Langston, Guymon	J. M. Nieweg, Duncan
Tulsa	A. W. Roth, Tulsa	R. B. Hays, Guymon
Tillman	A. J. Hays, Frederick	W. Forest Dutton, Tulsa
Wagoner	F. W. Smith, Wagoner	J. E. Arrington, Frederick
Washita	D. W. Bennett, Sentinel	J. L. Reich, Wagoner
Washington	W. E. Rammel, Bartlesville	A. S. Neal, Cordell
Woodward	Ralph Workman, Woodward	J. G. Smith, Bartlesville
Woods	Isaac Hunt, Freedom	C. W. Tedrowe, Woodward
		D. B. Ensor, Hopetown

**DANIEL W. WHITE, M. D.**

**PETER COPE WHITE, M. D.**

Practice Limited to  
**TREATMENT OF DISEASES AND SURGERY OF EYE, EAR,  
NOSE AND THROAT**

208-9-10 First National Bank Building  
Hospital: Sand Springs, Oklahoma

Tulsa, Oklahoma  
4-16

**DR. RALPH SMITH**

502 R. T. Daniel Building. Phone 2010.  
Office Hours: 11 a. m. to 1 p. m.; 3 p. m. to 5 p. m.

Practice Limited to Surgery.

Tulsa, Oklahoma  
10-14

**F. L. WATSON**

**SURGEON**

Suite 32-33 Kress Building

12-17

McALESTER, OKLA.

**DRS. CRONK & LOVELADY**

**SURGERY**

Methodist Episcopal Hospital

Guthrie, Oklahoma

**D. W. A. FOWLER**

**OBSTETRICS AND OBSTETRIC SURGERY**

534 Lee Building

OKLAHOMA CITY

**DR. CURT VON WEDEL, Jr.,**

Practice Limited to Surgery

208 Colcord Building

Oklahoma City

**DR. LeROY LONG**

Practice Limited to Surgery

Suite 608 Colcord Building

Oklahoma City

**DR. ROBERT L. HULL**

Practice Limited to  
**Orthopedic Surgery and X-Ray**

830-37 American National Bank Bldg.

Oklahoma City

IN WRITING ADVERTISERS, PLEASE MENTION THIS JOURNAL

# THE JOURNAL



## Oklahoma State Medical Association

VOLUME X

MUSKOGEE, OKLA., MAY, 1917

NUMBER 5

### MUCOUS COLITIS.

E. J. REICHLEY, M. D., Helena, Okla.

This condition or disease is a manifestation of perverted secretory and absorptive functions of the intestinal mucosa. The fact that so many different names have been applied to this condition, by different authors, and almost as many different etiologic factors advanced in an effort to describe it, would indicate that there is not an entire consensus of opinion as to the proper classification of the disease. The etiologic factors most often given are chronic constipation—sometimes constipation alternating with diarrhea, and the passing of mucus from the bowels.

Several writers (Nothnagel and Edwards) tell us that the true etiology of the disease is to be found in disordered nerves which preside over the secretions and nutrition of the intestines and that the accompanying neurasthenia is in fact the real cause of the disease.

Other writers (Boas, Van Norden and Tuttle) tell us the disease is a true colitis accompanied or caused by real lesions in the intestinal mucosa and that the neurasthenia is one of the results of said lesion. From this it is probable to assume that both conditions exist; giving us the same train of symptoms from two different etiologic factors. About 80 per cent of cases occur in young adult females and are generally accompanied with some disease of the genital organs.

**Symptoms.** The symptoms are almost as numerous as could be imagined. We usually get a history of a gastric disturbance extending over considerable time; with eructation of gas and some distention after meals. Constipation, sometimes alternating with diarrhea and almost constant abdominal tenderness. This tenderness is one thing the patient will emphasize in detailing her complaint. It is almost constant and so tender that the first light palpation seems to cause considerable pain; however, after a little manipulation quite deep palpation may be made, with very little apparent discomfort. This pain is generally referred down the back of the legs or leg, sometimes one or both. Upon deep palpation, as before mentioned, we usually find a colon loaded with fecal material and abdomen slightly distended. The nervous symptoms are many and varied; the patient often becoming very irritable and presenting everything in the category from hysteria to coma. There are times of impaired mentality, faulty memory, melancholia and hypochondriasis; to be followed sometimes by increased mental alertness and a buoyant spirit. Bladder symptoms usually present themselves, especially when there is any tendency to genito-urinary disease, such as frequent micturition pain and strangury.

The discharge of mucus from the bowels, the one most diagnostic symptom, is



paroxysmal, and during such paroxysm most all symptoms are increased in severity. In some patients these attacks are very severe; with pain, nausea, headache and vertigo, presenting an aspect easily confused with appendicitis or other acute intestinal diseases. After the mucus passes off, we find all symptoms abating and a general improvement ensues until another paroxysm occurs. These intervals may vary in time from a few days to months and sometimes even a year may intervene between attacks. The mucus is not found in every stool, sometimes only once a week, and others as often as 10 or 12 times in 24 hours. Some patients can foretell, with considerable accuracy, the coming of a paroxysm by some symptoms which they have learned to interpret: as tingling or itching of the flesh, blueness of nails, cold extremities, and chilly or creepy sensations. The mucus passed varies in color and consistency. Sometimes it is a clear colorless jelly-like substance, other times streaked with blood. It may also be yellowish in color, semi-opaque and semi-membranous, or yellowish, opaque and distinctly membranous. These patients usually retain the natural contour of the body and lose little, if any, flesh. Sometimes intervals of gaining flesh only to be lost again in the next month or two. The intestinal stasis, with its absorption of toxins, may produce furuncles, carbuncles or an eruption resembling acne.

The diagnosis may or may not be easy. If the colonic symptom predominate, our attention is called that way at once and a diagnosis is made. But when genital and pelvic symptoms or the neurasthenia overshadow every other symptom, we may grope around considerably before arriving at a definite conclusion as to the trouble. In fact, it is very easy to confuse these paroxysms with an acute intestinal trouble or tubo-ovarian inflammations. A recent writer has said that a woman with a sub-developed muco-membranous colitis who has escaped an abdominal section for supposed utero-ovarian disease, may consider herself fortunate. Particularly is an attack of acute appendicitis easily confused with this condition. We have in both a history of previous attacks; pain, tenderness, etc.; and as most patients with appendicitis have had attacks of entero-colitis, the analogy becomes the more marked.

There is no question that appendicitis is mostly a surgical disease, and should we open the abdomen and find a normal appendix with no inflammation or adhesions and find the attacks of pain recurring after our operation, we, to say the least, would be somewhat chagrined, and the patient would probably lose faith in the regular medical fraternity and resort to patent medicines and chiropractic adjustments. By this, we do not wish to restrict the fact or axiom that early operation in appendicitis is the only safe procedure, but we would contend for a pre-operative diagnosis. The use of the sigmoidoscope should not be forgotten in confirming our diagnosis.

**Prognosis.** As to a cure the prognosis is bad, but as to life very good, as it is seldom that a patient succumbs to a chronic muco-colitis in itself. We can, however, assure a considerable amount of relief and if the patient will be persistent in carrying out the treatment and hygienic measures over an extended period of time, a cure may be effected.

During a paroxysm our treatment must necessarily be an effort to relieve. This should be accomplished by hot applications, rest in bed and relief of nervous symptoms if possible without the introduction of an opiate into the system because of its constipating effect. However, at times it will be necessary to resort to this measure. It is then best given hypodermatically. The treatment proper is mostly prophylactic in character; looking first to the diet, we attempt in this way by feeding our patient on such foods as will leave a bulky residue, to stimulate the bowels to more activity. The rich concentrated foods are generally to be avoided. Establish regular habits as to eating, resting, exercise and answer nature's call promptly when the desire occurs. The home and social life of patients should be as evenly tempered as possible with plenty of deviation from a monotonous course, yet nothing of an exciting nature. Plenty of outdoor exercise has a favorable influence. The daily emptying of the large bowel with as little irritation to the mucosa as possible

is what we are attempting to do and many ways may be tried. Among the most rational methods, is massage, enemas and non-irritating drugs.

The massage is a valuable aid in many cases. Beginning in the right inguinal region, massage in the direction of the large bowel up, across and down, and to place of starting. This must necessarily be very light in some cases at first, but by careful manipulation deep massage may be given. The patient may be taught to massage her own abdomen either with her hands or by the use of a round iron ball weighing 4 to 5 lbs. The doctor, as well as the patient, will often be surprised at the amount of relief thus afforded.

The enema of normal saline solution or saline solution with the addition of sodium bicarbonate in about the same proportion will aid greatly in clearing the colon of mucus. This should be given very slowly with hips well elevated in order to get the water as high in the colon as possible. It has been proven that a colon tube cannot be passed more than 6 or 8 inches into the bowel, more than about once in twenty times unless a sigmoidoscope is used, therefore a short tube is just about as good as a long one. The enemas are best given in the evening. Every evening for a few days, then every other evening for a week, and gradually reduce to once or twice a week. If from 4 to 8 oz. of olive oil is injected in the bowel and retained over night, it adds greatly to this treatment. Fecal masses, dry, hard and covered with mucus, will be washed out though the bowels have moved daily.

When laxative drugs are used we should select one that is non-irritating, as an irritation of the intestines would aggravate the condition. Cascara sagrada, castor oil, mineral oil and comp. licorice powders are some of the drugs most often used. A good dose of castor oil daily is very efficacious in producing a thorough evacuation. The mineral oils such as Stanolax, Stanolind, American oil, Liquid Paraffins, etc., if rightly used will act nicely. These oils should be taken at least 30 minutes before meals, and would better be taken an hour or more before the ingestion of food. They should also be continued over some period of time, as they do not act as a purge but more as a lubricant. This treatment will not effect a cure in all cases, but if followed persistently over an extended period of time in conjunction with an appropriate diet, will give much relief if not a cure. In speaking of a cure, we would mean not only relief when the treatment is being given but throughout the life of the individual.

Nothnagel says: by putting patient to bed, emptying colon, and keeping it empty by giving such food as leaves no residue; as cream, a cure can be effected in six weeks. I fear that in many instances when the patient resumed his former life and habits the old complaint would return.

Surgical relief offers no great inducements. Some surgeons recommend keeping the colon empty by colostomy, thus establishing an artificial anus. Others prefer appendicostomy and keep colon clean by daily washing until cured, then close. The trouble with these operations is that the suffering and inconvenience attending are almost equal to, if not greater than, the original condition.

In bringing this paper before the society today, it is not done with an idea of "telling you something" or enlightening the physicians present, but more with the idea of gleanings from the discussion, the ideas and experiences of my colleagues that which will be helpful to me in my attempt to alleviate some of the pains and aches of humanity.

### ECZEMA AND DERMATITIS.

W. J. Heimann, New York (*Journal A. M. A.*, Jan. 13, 1917), argues for the identity of the two diseases, eczema and dermatitis. The designation of the former, he says, is defective, and would apply as well to herpes, pemphigus, or any other vesicular or bullous disease. It would be more rational to eliminate the term entirely, and to speak of dermatitis of known etiology on the one hand, and of unknown etiology on the other, the latter corresponding to what has hitherto been called eczema. Objectively the two diseases are indistinguishable, and, as he shows by his remarks on histopathology, they are alike microscopically. In terms of general pathology they represent, as the case may be, acute, subacute, or chronic catarrhal inflammation.

## THE NURSE.\*

O. C. KLASS, M. D., Muskogee, Oklahoma

The time has arrived when the practitioner of medicine, whether general or specialist, in his daily routine of work is, at times, compelled to employ and rely upon his nearest, and supposedly best informed and equipped, assistant, to carry out those methods, ideas, practices, etc., which those through years of personal experience, combined and associated with those of his colleagues of greater experience and opportunity, to realize the acme of his desires, success, and satisfactory results with his clientele, The Nurse.

The practitioner of today has become and is becoming more dependent upon this one, so-called, convenience, where practicable and obtainable, in seeking relief, as it were, from the minutiae of details being carried out with the patient, in the various and varied ailments of his patients.

Conditions in our country have changed to the extent that all classes of people seek, where possible, the services of a nurse for the convenience as well as the satisfaction of having done for their sick all that possibly can be done, to obtain the best results possible. The question that confronts the medical profession today, growing rapidly and persistently, as in the lay trades, professions and business world, etc., is better service.

Where the practitioner of yore, in the times of our parents and grand-parents, was required to undertake, as do some of our colleagues in the remotely rural districts, not only their sacred, difficult, tedious, professional tasks, but must also assume the role of cook, nurse, chamber maid, etc., in order to save lives, we in the better organized communities can unload these tasks upon the shoulders of the nurse, hoping, trusting and praying, at times, that part thereof, at least, will be executed according to our desires and instructions.

In no country have Florence Nightingale's ideals been more thoroughly and carefully studied, and the attempted scientific solution thereof, than in the United States. We are daily awakening to the necessity of such advanced ideas, as the demand is made and thrust upon us for so-called better service and better nurses.

We find in foreign countries, as Germany and France, the domestics appearing in the capacity and role of nurses. In England a species of Sisterhood made up of applicants of the lower class has arisen. In Austria and many neighboring countries we find the Catholic sisters and so-called domestics as nurses. In America, a new sense of interest and enthusiasm has been awakened in this work and to this noble calling, so that today we find young women from all walks and stations of life taking up the work. It's not uncommon these days to find the sisters and daughters of the upper, refined classes entering training schools and completing their courses in order to follow professional nursing.

As Dr. G. K. Dickinson of Jersey City so correctly and ably stated, "that the obvious result of a special profession with numerous intellectuals belonging to it, is that it should become idealized and the active ones in it in time should build on their ideals and endeavor to influence the main body." Therefore our first duty and endeavor is to establish first-class, well equipped hospitals, with all modern, scientific equipment, then a comfortable, commodious, convenient home for the nurses. These hospitals should be manned with graduate nurses, in sufficient number, who have had special instruction and training in the management of hospitals and conduct of training schools.

As H. L. Bridges, St. Louis, so correctly states it: "A hospital is an educational institution, or should be, existing for the purpose of socializing the individual and to train them (nurses) to make the necessary adjustments to their environments. Thus, a training school for nurses should be an educational institution, whose particular function would be that of training properly qualified young women to cope

---

\*Read before the Muskogee County Medical Society, October 9, 1916.



adequately with the problems they will meet in their future work." The vast majority of training schools exist for the mere purpose of supplying cheap nursing service for the hospital, and since few schools exist today with sufficient endowment to enable them to exist independent of a hospital corporation or that are controlled and supported by the state, therefore exists the difficulties in working out these problems for the nurses of the future. In some institutions nurses are no more than upper bedside servants or semi-aristocratic chamber maids.

The prime object in establishing training schools was for the care of the sick in the hospital and home, in order that the physician and surgeon might have some one to intelligently observe his cases and carry out his instructions. The increased value thereof can be appreciated today by those who can and do avail themselves of these advantages (dentists, physicians), insurance companies (visiting nurses), clinics, and other associations for the teaching and attendance on the poorer classes. The nurse doing general practice has an irregular, uncertain employment and oft-times nothing to do, again after days and weeks of faithful service, receives only broken promises and no pay. It is stated as extremely rare for a nurse to be so popular and having the clientele and good health as to bring her income to over \$600 or \$700 annually, and often it is much less.

The above mentioned allied associations give them steady employment with evenings and holidays off, summer vacations, with a regular stationary, steady employment and salary, far exceeding the other. As a result of the above mentioned facts, together with so-called high standard of educative requirement with extension of training term to three years, as demanded by some legislatures, and at the solicitation of some members of the nursing profession, we can see and understand the reason for so few young women applying to training school. Of course, the larger, well-equipped institutions with every convenience, comfort and entertainment, do not feel the pinch and continue to have good sized waiting lists, yet not as great as heretofore, but smaller institutions have few applications and difficulty in securing applicants. In many states laws have been enacted which effect to greater or lesser extent the sources from which nurses are acquired. If the nurses' training school is what the name should imply—an educational institution—a curriculum should be instituted, according to the aims of the school or schools. A well regulated course that will bring the best possible results should be given.

I have advocated and would like to see it put into practice in our city hospitals and throughout the country a separate and distinct course of study for probationers, juniors and seniors, which should include both didactic, laboratory and practical methods in all the most essential subjects for study. In a survey made by Miss Nutting for the United States Bureau of Education for the first year of nurses' training, of 692 schools she found the time allotted to various subjects as follows: anatomy 8 to 72 hours, average 20 to 24; physiology 6 to 60 hours, average 20 to 24 hours; bacteriology 2 to 40 hours, average less than 10; hygiene 2 to 24; dietetics 5 to 40; materia-medica 10 to 60. So you see the great variance in time allotted to these subjects.

I would suggest that the nurse in training be given the same course as the medical student, eliminating the technical complicated matter. Anatomy, osteology, bacteriology, physiology, materia-medica which should include poisons, antidotes, urinalysis, surgical sterilization and dressings, preparation of patient for operation, treatment of after complications, emergencies arising (collapse, hemorrhage, etc.), emergency care, obstetrics, preparation before and treatment after confinement, with care of baby. I would suggest a touch course to acquaint the nurse with progress of labor and presentation. Emergency treatment (hemorrhage, convulsions, etc.) all before the doctor could arrive. Practice of medicine, such as symptoms, some complications, location of trouble and treatment, diseases of eye, ear, nose and throat, in practical superficial way, to give them an idea of care of injury from foreign body, etc., in emergency, also dentistry as relates to care of teeth. Diseases of women, so as to enable them to intelligently understand the

most essentials in the care of a woman during the menstrual and child bearing periods. Practical nursing, with a thorough practical course in cooking and preparation of food for different conditions and diseases. This is a muchly neglected, part of the training. Another important part is the teaching by precept, example and practical illustration, the nurses relation, respect, courtesy, and ever ready assistance to the doctor. The doctor should respect the nurse in her place and offer the utmost consideration and courtesy possible, and vice versa the nurse *must respect* the attending physician, and do all possible to assist him, never forgetting her obligation to him, by showing him the utmost courtesy, respect and consideration at all times, ever ready to listen, obey, and carry out his instructions to the letter, but never willing to criticize, scorn, disobey, ridicule to patient, friend or any one anything suggested, as nurses should be the pupils to be led by their superior advisors.

It cannot be expected of nurses to acquire sufficient knowledge from observing, seeing, etc., alone, all that is so essential in her training, without explanation and instruction, but on the other hand, the demand and necessity today is for training and teaching the nurse at both bedside and in the lecture room, by means of practical demonstrations. A nurse that comes on duty at 7 a. m. and works hard during the day to the point of tire or fatigue, cannot then be expected to be able to study, comprehend and recollect the lectures and what they read evenings. Often on account of shortage in nurses, probationers, etc., after a hard day's work, some nurses are called and required to do extra duty on emergency cases, without proper rest. The diet in some hospitals for nurses is very poor, improper in quantity, quality and preparation, which should always be the best of the most nutritious character that will supply the necessary elements to give nurses strength to follow their work.

Then again, is it fair to the applicant probationer that enters training to use her as much as she is used as a convenience for the institution and to neglect so largely the bedside training? It often happens that many institutions which boast and pride themselves on the efficiency of their training school, leave such training to some subordinate nurse, inexperienced, while those paid for the purpose are seldom seen at the bedside, or performing such duties. Again, errors occurring, whether grave or mild, instead of being remedied by precept and example, are too often rectified by severe discipline or reprimand.

The hospital training schools that are really doing good and excellent work need keep up their work without intermission or excessive effort, yet they have not the means to build and equip nurses' homes and give them homelike conveniences equivalent to those which they left, which in a way accounts for the difficulty in securing probationers. If poor quarters are provided without partial comforts, coupled with poor food, long hours of hard work, improper rest, recreation, etc., what can be expected of the outcome and outlook for the nurse? Look at the hospitals that graduate nurses physical wrecks, who succumb to diseases contracted while in training or, on account of their lessened resistance, succumb to disease contracted outside, after their exit from the training school.

Nurses should be required to submit certificates of good health before admittance to training and receive regular, periodic examinations while in training and records kept thereof, by a physician competent to discover the slightest deviation from normal in her (nurse's) physical condition, that can be remedied instantler, and her future health and existence spared and restored. Regular, well regulated hours for work, rest, recreation and study, should be instituted, carefully and systematically carried out.

Since the doctors are to be, and really are, the beneficiaries, so to speak, in the efficiency of nurses, it should stimulate them to avail themselves of the opportunity, and gladly, willingly accept the invitation to lecture to nurses in training, giving them the very best they know or can obtain from literature on their respective subjects, for the enlightenment of these knowledge-hungry pupils whom we expect

so much of and who come to our relief oftenest. Doctors accepting these lectureships should sift out the little, insignificant, uninteresting, unimportant matters and give to the class of nurses that which will prepare them best to cope with disease, emergencies, as they arise, in case the nurse should be attending his patient. The doctor accepting these lectureships should be punctual in attendance at these lectures, as he, while feeling that the nurses do not appreciate his efforts, for the time being, and at times seemingly so, yet, he must forget that part and remember he is trying to do something for his own assistance, relief and comfort, at the same time for humanity's seeming ignorance, in the care and treatment of disease. Conditions alter cases, I know, in doctors' lives, and in case of emergency, he could not be expected to attend lectures, but instead of being seated in a chair with feet cocked on a table smoking a cigar or pipe, telling tales, jokes, or playing pitch, he could at some future time derive more comfort from a good enlightened nurse's service than that obtained at the present time.

If I had my say upon the requisites of nurses for graduation, I would exact three years of training, after and in such studies as enumerated before, and a good final examination, as some nurses have experienced who have been lectured and taught by me, the past 10 years, and if they gave satisfactory evidence then of their fitness, in both practical and theoretical qualifications and knowledge, then I would give them their certificates, otherwise they would become statuettes in the school in attempting to master the subjects allotted them. The matter of lecturing to nurses, and giving them just any old thing and afterwards no tests of their knowledge, and just passing them on and giving them certificates, as a matter of form, and to advertise the school, is folly, ridiculous and criminal on your and their parts, as one mistake through her ignorance might cost you the life of your family or one of its members, not including malpractice procedures, etc. Be thorough, faithful, conscientious.

Some nurses (as a rule) feel they are the most enlightened, smartest humans, regarding human ailments known to man, and one ignorant nurse can do more harm than a thousand physicians could reconstruct.

The demands of the public in various stations of life for trained and educated nurses has placed on foot a movement which I commend, of having nurses, of different qualifications, for people in the various financial stations of life. There has been organized in New York, "The League to Promote the Legal Classification and Standardization of Nursing Service," whose purpose is to promote the proper classification and standardization of nursing service. Dr. W. O. Stillman of Albany, N. Y., is its president. It is found that the laborer, clerk, farmer, mill or factory operative, artisan, shop or store worker, followers of trades, etc., constitute the greater part of our population and earn less—on an average of \$12 to \$15 weekly. It is therefore, evident that these people struggling to meet their expenses (rent, food, clothing,) for a family, often including dependent children, are financially unable to pay \$25 to \$30 a week to a graduate nurse and furnish her board, in case of sickness. These people are certainly entitled to as much consideration and care as others, but do not need or expect the elaborately trained nurse. It has been clearly demonstrated, that we must provide nurses for people by classifying them into about three standards or divisions, which should be regulated by legislation, in order to produce uniformity of standard and classification.

It is desired that states pass laws requiring all nurses desiring to be officially and publicly recognized as competent in their classes, to take reasonable examinations in order to show their fitness for their work.

*The First Class:* should include the two or three year hospital graduate who has been thoroughly, scientifically and especially well trained along elaborately prepared special lines, that commands the highest fees.

*The Second Class:* who take a course of not less than six months to a year in a school that gives personal instruction, lectures and demonstrations in nursing, technic and practical bedside experience, that commands moderate fees for their service.



*The Third Class:* that receives a less complete course of instruction but that will meet the requirements of those who are to practice massage, become nurse maids, domestic self-educated nursing attendants, etc.

All these should be required to follow a specially prescribed course calculated to meet their needs. These various classes of nurses should be required, as stated above, an examination, and be licensed by the state, as recommended by Stillman, through the department of education, but I would suggest and change it to the State Medical Examining Board, that had a graduate nurse as a member of the examining board.

Stillman says: "We feel that the nursing of the sick which must meet conditions of poverty and semi-poverty, should not be open to exploitation in the interests of trades unionism or any selfish money monopoly." The examining board having charge of the examination of applicants, should be free of commercialism, and non-partisan in its interests. The needs of the masses of sick people should be considered first, rather than that exclusive privileges be given any close corporation, institution, etc., at the expense of the sick. From the standpoint of morality and utility we must consider the humanitarian side of the nursing question, which seems and is more important than the professional one. In nursing matters a trades union attitude has apparently threatened to supercede considerations of humanity and all regard for practical financial limitations. This is the plain truth of conditions.

In closing, let me advise, suggest and entreat, that you do your duty to the training school, hospital and its pupil inmates, who are preparing themselves as your assistants, solely to better the service.

### FRACTURES.

G. W. Hawley, Bridgeport, Conn. (*Journal A. M. A.*, Feb. 10, 1917), says that the treatment of fractures is largely a mechanical problem and the methods may for many reasons seem to be antiquated. Even the method of applying weights to fractures of the femur would have, he says, a familiar look to some of the ancients. The advance that has taken place has largely been incident to the development of roentgenography and in the direction of technical and instrumental improvements in the operative treatment. The simple methods have not received the attention that is due them, and even in the operative methods, he says, the development has been in the direction of applied mechanics. One thing that Lane has emphatically demonstrated is that successful fracture operations are impossible without efficient instruments and technical dexterity in the handling of exposed tissues, hitherto unknown. Hawley says it is strange in this age of machinery and instruments of precision to see so much dependence placed on the manual treatment of fractures. Hands must vary in dexterity and even skilled hands become unsteady when fatigued. The element of unreliability is always present. When it comes to precision and uniformity, mechanical methods must supersede the manual as in any other work in which intelligent application of force is required. Formerly diagnosis of fractures had not the aid of the Roentgen ray, and the time is fast coming when their treatment will not be allowed without methods and apparatus for its use. The time is coming when patients will be treated almost exclusively in hospitals, and when it will be dangerous to undertake the treatment outside without complete scientific equipment. At the same time it will be necessary for the hospitals to pay more attention to fracture cases, and special training will be required. Much unnecessary handling of broken limbs should be eliminated, thus saving needless suffering and increasing the activity of cure. There is no reason why a fracture patient entering the hospital should not at once be placed on a bed and in a splint permitting a roentgenogram. In the treatment of some 3,000 cases of fracture during the last seven years he has preached and practiced the immediate reduction and immobilization of fractures under ether, and during this time he has never cut or split a cast in anticipation of or on account of swelling, and he has successfully proved to himself that the mortality and suffering in fracture of the hip in old people is directly due to conservative treatment.

## THROMBOPHLEBITIS.\*

P. P. NESBITT, M. D., Muskogee, Oklahoma

The term thrombophlebitis is usually used to cover all cases of thrombus formation in the veins, although in some instances there is no phlebitis or inflammation or infection of the veins.

This condition occurs in the course of protracted illness, typhoid fever especially, and is not a very infrequent complication of childbirth and surgical operations. In typhoid it usually develops about the fourth week. When it follows childbirth or surgical operation, it usually begins from the tenth to the twentieth day.

Thrombophlebitis may occur in any vein, but usually develops in the lower extremities or the pelvis. The long saphenous vein is the one most commonly affected, but the femoral and even the iliac may be involved. The process develops more frequently on the left side. This is due to the slower blood current caused by the left iliac vein being crossed and pressed upon by the rectum and right iliac artery. When the veins of the opposite side become involved also it may be caused by the process extending up the iliac vein to its junction with the iliac vein of that side, but usually the process extends along the superficial anastomosing veins.

Two general classes are described, the infected and the non-infected. Some observers deny that there is a non-infected type but that all cases are due to infection, though the infective focus may be very small and easily overlooked, as for instance, a small stitch abscess. Others assert that a clot sometimes forms in a vein as the result of mechanical injury to the vein sustained during the course of operative procedures or otherwise. This is especially liable to occur where a part of the veins of a plexus are removed, as in operations about the rectum or spermatic cord or where a part of the broad ligament is removed.

By far the greater number of cases of thrombophlebitis are caused by infection, and any of the infective bacteria may be the causative factor. The infection may be from without the vein as in infected wounds or phlegmonous infections of the subcutaneous tissues. Here the infection invades first the surrounding tissues, then penetrates the successive coats of the vein until the intima is reached, then clot formation begins. Again the infection may be carried by the blood, bacteria or infected particles lodging in the veins where the intima has been injured or where the blood stream is sluggish. Under these conditions an infected clot forms and phlebitis occurs secondarily.

Predisposing causes are varicose veins, prolonged rest in bed, weak circulation, and anemia. The pathology varies with the cause. In mechanical injury some of the cells of the intima become loosened and project into the lumen of the vein and act as the nucleus for the formation of a clot. When a vein becomes infected and inflamed the catalytic property of the intima is lost and clot formation results. When a thrombus that entirely closes a vein has formed, there is of course a stasis of blood above and below the clot. This results in gradual addition to the clot in both directions. Below the thrombus this may stop at the first anastomosing vein or it may continue throughout the lower length of the vein. Above the thrombus the clot formation continues until it reaches the point where the affected vein empties into a larger vein.

The clot formation may stop here or the larger vein may become affected and a thrombus form in it, or the clot in the smaller vein may continue to form, projecting into the blood stream of the larger vessel to such an extent that it finally is broken off to form an embolus. A thrombus may become infected and break down and be carried away wholly or in part. If these broken fragments are of considerable size they form emboli, but if very small they remain in the circulation, causing pyemia or bactremia. A whole or a large part of the thrombus may become dislodged and be carried away to form a large embolus. If the thrombus does not become dislodged or broken down, blood vessels extend from the surrounding

\*Read before the Muskogee Academy of Medicine.

tissues through the walls of the vein and into the clot. Also blood vessels penetrate it from within the lumen of the vein and a part or all of it be absorbed, opening the vessel again. The remaining part undergoes fibrous changes, becoming firmly attached to the vessel wall, or there may be a deposit of calcium salts forming a phlebolith.

A thrombotic vein, if near the surface, can be felt as a hard tender cord. Around the vein and in the area drained by it the tissues become swollen and infiltrated. If the process involves the veins of the pelvis and the lower extremity, the lymph circulation is interfered with and the thigh becomes infiltrated with lymph, giving the swollen white glistening appearance to the condition commonly known as "milk leg." Below the knee and in other locations the swelling is due to serum in the tissues as in ordinary edema. Usually the skin is not discolored, but if the infection is severe the surrounding tissues may become indurated and phlegmonous and the skin is reddened or of a purplish color. The infected clot may cause a local abscess, sometimes a number of these appear. If located in the peritoneal cavity, a septic thrombus may open through the walls of the vein, causing a general peritonitis or a walled off abscess.

The symptoms of thrombophlebitis are pain, rise of temperature and pulse, and swelling. The pain is usually persistent and not very intense. It is felt in the pelvis, the groin, the popliteal space, or the calf, depending on the location of the thrombus. Sometimes the whole affected area is quite painful. The onset is sometimes marked by a chill and rapid rise of temperature, but more often there is no chill and the temperature rises gradually. Except in those cases accompanied by a severe cellulitis the fever is not high, rarely above 102, and is usually very irregular. The pulse is usually rapid as compared to the rise in temperature. The swelling begins in a few hours after the pain and fever and varies with the size and number of veins affected.

Diagnosis is usually easy. Sometimes when the process begins in the veins of the pelvis or the deep veins of the thigh, it is hard at first to differentiate from other forms of infection, but when the condition is fully developed, it is almost impossible to mistake for any other condition.

The course of the disease varies with the size and number of vessels involved, the severity of the infection, the condition of the patient, and the treatment. The pain and fever usually disappear in from ten days to three weeks, but the swelling persists for months or may even be permanent.

Complications are embolism, abscess formation, pyemia, and gangrene. Embolism is the most frequent and most feared complication. If the clot comes from the lower extremity or the pelvis, it passes up through the vena cava, through the right heart and lodges in the pulmonary artery or one of its branches. The result depends on the size and condition of the clot, small particles if sterile lodging in the smaller branches will cause small infarcts which may cause no special symptoms. If these small particles are infective, the infarcted area becomes infected and an abscess results. If there are a number of these in the lungs, a serious or even fatal septicemia may result. If the embolus occurs in a large branch of the pulmonary artery, it shuts off the blood supply to the part of the lung supplied by this branch. The immediate result of this is a profound collapse, the symptoms of which are pain in the chest, weak irregular pulse, cyanosis, and dyspnea. If the patient rallies, the affected part of the lung becomes consolidated. It may later undergo fibrous degeneration, or collateral circulation be established and it clear up as an ordinary pneumonia, or if the clot is septic the whole affected part may break down, forming an abscess.

Gangrene in the affected extremity is not a very common complication. If the process spreads through the tissues and involves the arteries so that the blood supply is cut off, a dry gangrene results. If all the veins are stopped by thrombi, the return circulation is cut off and a moist gangrene results. The condition leading to pyemia was considered under the head of pathology.



When a thrombus forms in the splanchnic veins and becomes detached, it is carried through the portal vein and forms an embolus in the liver, resulting in infarcts or abscess formation, depending on whether or not the clot is septic.

In uncomplicated cases of thrombophlebitis the only annoying after effect is the swelling of the affected limb caused by the imperfect return circulation. This is usually troublesome for several months or years, the limb becoming swollen and painful when the patient is on his feet for any considerable length of time. In complicated cases the after effect depends of course on the nature and severity of the complication.

The prognosis in uncomplicated cases is good as to life, and complete recovery after a variable length of time is the rule. Treatment resolves itself into prophylaxis, treatment of the condition itself, treatment of complications and after treatment. Probably the great majority of cases of thrombophlebitis that occur are, with our present knowledge, unavoidable. But I feel that by more care many of the cases could be prevented. This care would include special efforts to avoid injuring veins during operations by hemostats or by avoidable rough handling. Extra efforts to avoid infections in surgical and obstetric cases. Efficient drainage of infected cases, including infected wounds and stitch abscess. Bandaging the limbs of patient with varicose veins during their confinement to bed. Elevating the limbs for a part of the day in those patients who are weakened by prolonged illness or severe surgical or obstetrical conditions. Circulatory stimulants when needed. Proper food and tonics to build up the blood of those patients with anemia from loss of blood or the result of disease. Keeping the lower bowel emptied to prevent pressure on the iliac vein.

Treatment of the condition itself consists of absolute rest in bed with the affected limb elevated, the avoidance of movement or massage of the limb, moist or dry hot applications over the painful areas. An anodyne may be necessary to relieve the pain, especially at night if it prevents sleeping.

Some writers advise that the limb be lowered to the level of the body for a part of the time each day, but personally I do not see the advantage or necessity of this and it means an increased amount of handling that increases the danger of embolism. Some advise that the limb be covered with absorbent cotton and a loose bandage put on over this, but I fail to see how this is of any advantage. If the veins of the affected limb are varicosed, the application of a bandage snug enough to support them might be of value to prevent extension of the process, but ordinarily the elevation of the limb will be all that is necessary. Opening the vein and removing the clot has been done, but it has never been accepted as a routine treatment.

When lung embolism occurs and is not immediately fatal, the indications are to relieve the pain, the circulatory depression, and the dyspnoe. A small dose of morphine hypodermically is best to relieve the pain. Atropine or camphor hypodermically is best to stimulate the heart, and oxygen inhalations are best to relieve the dyspnoe and cyanosis.

If abscesses form, it may be necessary to drain, but if they are small and cannot be definitely located, it is best to wait and see if they will not be cared for by the system. When an abscess forms around a septic thrombus it should be opened as soon as it can be determined that pus is present.

When gangrene develops in the limb, amputation should be done at once, and even then it will usually be unavailing.

Pyemia and septicemia should be treated the same as when they develop from any other condition.

After treatment consists of keeping the patient in bed at complete rest for at least two weeks after pain and fever have disappeared. Building up the general health by proper food and tonics and by proper regulated exercise. The limb nearly always requires support for some time after the patient begins to walk, as otherwise it will swell and become painful when he is on his feet. This support can be furnished by bandaging or wearing elastic stockings.

## THE FALLACY OF FUMIGATION.—THE ABUSE OF TINCTURE OF IODINE.—ALCOHOL NOT AN ANTIDOTE TO PHENOL.\*

CHAS. W. HEITZMAN, M. D., Muskogee, Oklahoma

The first subject I wish to present for your consideration tonight is that of fumigation. As far back as we have any record man has always sought to destroy the action of disease by some sort of purification. Early history tells us of the purification by fire and smoke. We still agree that fire is a great purificator either in itself or by the steam generated by its agency. The smoke or fumes generated by the use of various agents have been and are still used as a method of fumigating the rooms that have been occupied by diseased persons and also the clothing and room furnishings. Sulphur has long headed the list of such so-called disinfectants. This agent can be dismissed with just one thought, for we all know that in order to be effective the sulphur dioxide gas generated must greatly exceed 4 per cent. A 4 per cent sulphur dioxide gas extinguishes fire. The ordinary method used in sulphur fumigation is to burn the sulphur in the room to be disinfected. It can readily be seen that if all the sulphur is consumed that we have not generated a 4 per cent gas and if it is not consumed the same condition prevails as above stated, this per cent of gas being fatal to burning flame. This to my mind is sufficient reason to eliminate sulphur as a fumigant by the methods that are at present employed. The next and perhaps the most popular disinfectant is formaldehyde. The International Congress on Hygiene and Demography that met in Washington, D. C., during the year 1912, arrived at the conclusion that disease is almost invariably conveyed by contagion, and not by infection, that is to say, by contact, either direct or indirect with a patient suffering from the disease in question. The method of direct infection is obvious; indirect infection is caused mainly by the inhalation of dust acting as a vehicle for the pathogenic organisms diffused by an infected person. This conclusion, in conjunction with the appointment of a joint committee of this Congress and of the International Congress of Applied Chemistry with the object of defining a simple method of testing disinfectants, may have a far reaching effect on the health of the nation. At first sight the appointment of a joint committee might appear to be of little more than academic interest. Such, however, is not the case. At the present time in this country, so far as I know, there is no accepted method of controlling the sale and manufacture of disinfectants, and the result is the use of many preparations which are disinfectants in name only. When once a workable test has been decided upon this abuse will come to a speedy end, and the users of disinfectants will be able to assure themselves in advance that the preparations which they employ are capable of performing the work required of them. An illustration of the unsatisfactory conditions of disinfection in this country may be found in the practice of fumigation by means of formaldehyde. Contrary to the generally accepted notion as to the use of formaldehyde for fumigating rooms, this disinfectant does not act in the form of a vapor or gas; in practice, it is dissolved in the minute droplets which result from the condensation of steam, in the absence of which formaldehyde has no bactericidal action whatever. Water will take up in solution forty per cent of formaldehyde gas, in which form it is known officially in the United States Pharmacopæia as "formaldehyde solution," the Rideal-Walker coefficient of which is 0.3, i. e., it has about one-third the efficiency of pure carbolic acid. If we take one part of carbolic acid in twenty parts of water as our standard of efficiency, to prepare a solution of formaldehyde capable of doing the same work, one part must be mixed with six parts of water.

We now see the difficulty of obtaining uniformly trustworthy results when working with formaldehyde. If too much steam is admitted into the chamber the ultimate dilution produced may be too weak, and if too little steam is admitted, part of the formaldehyde will be unavailable, i. e., it will remain in the gaseous form, which, as already explained, has no bactericidal action. Compare with this

\*Read before the Muskogee Academy of Medicine.

the ease and accuracy with which a standardized disinfectant can be prepared and applied in the form of a fine spray.

The British Medical Journal for November 3, 1894, referring to the disinfection of rooms by fumigation, stated: "On the ground even of economy there is no comparison between this obsolete process and a disinfectant spray; and while cases of renewed house infection are familiar to almost every medical officer in this country, we have Dr. Dujardin-Beaumetz's authority for saying that where the disinfectant spray has been introduced they are practically unknown in France."

## II. The Abuse of Tincture of Iodine.

It is obvious that the dressing of a recent infected and suppurating wound ought not to be the same as that of one in process of rapid cicatrization; in the former case an energetic antiseptic action is required, which, in the latter, could do only harm. Nigay (*Journal de medecine de Paris*, April, 1916) has noticed a custom among dressers of using a routine procedure of: (1) cleansing; (2) two or three applications of a ten per cent iodine solution; (3) application of a dry compress. Such a routine may injure the fine cellular layer which is at the basis of cicatrization, and iodine in such strength may even destroy the healthy epidermis, or cause a patch of eczema, especially if it is not freshly prepared and hydriodic acid has formed. Nigay remarks that this acid may be destroyed by adding one per cent of iodic acid ( $\text{HI}_2\text{O}_3$ ), which in the presence of hydriodic acid, forms iodine and water. The addition of four per cent of potassium iodide will also destroy the irritating acid. The ninety-five per cent alcohol of the tincture is, according to Nigay, too irritating to be applied to a healing wound; its great affinity for water dehydrates the cells and coagulates albumin. Reclus never used an iodine preparation stronger than one in fifteen of alcohol—about the strength of the U. S. P. tincture—and always insisted on a fresh preparation. Nigay thinks that even this formula of Reclus may cause damage if used too freely, and he has seen many wounds which were doing badly under its application, heal beautifully after it was stopped.

The final application of a dry dressing, according to the writer, is a mistake, as it is almost invariably too tight, and when removed with the speed required in military hospitals, generally takes with it an important layer of reconstructed tissue. Nigay's own method of treating wounds comprises irrigation, without pressure, gentle wiping with a dry compress and the application of an ointment.

Nigay uses a four per cent salol ointment or even sterilized petrolatum alone. Such treatment, he says, has proved much more efficacious in his hands than that of the indiscriminate application of tincture of iodine, a precious agent indeed, but not to be used without care and discretion.

## III. Alcohol Not an Antidote to Phenol.

Martin I. Wilbert, of the Public Health Service, in the Public Health Reports for April 28, 1916, makes some valuable comments on the widespread belief in alcohol as an antidote to phenol poisoning, and the studious avoidance of it as a diluent for phenol when used as an antiseptic or disinfectant. The belief in alcohol as an antidote, he says, is growing, but it is based upon erroneous reasoning. Wilbert recalls that Dr. A. M. Phelps in the New York Medical Journal for January 14, 1899, was probably the first to call attention in print to the antagonism of alcohol to phenol; he cited the experiment of Dr. Seneca D. Powell, who was accustomed to rinse his hands, alternately in phenol and alcohol, as a demonstration to his classes at the Post-Graduate School. Powell, misunderstanding the significance of this experiment, illogically announced that a similar action would take place in the stomach, in other words, alcohol would be found to be an antidote to phenol. Since then, the same error has crept into many publications, it was even suggested by Williams (*Druggists' Circular*, March, 1900) that a mixture of the two liquids would make a safe and excellent household preparation. The dangerous mistake has now become embodied in the laws of several states drawn to restrict the sale of carbolic acid.



The same line of reasoning has led to another error, equally absurd, but not dangerous, that mixtures of alcohol and phenol are less efficient as disinfectants. Again it was in the *New York Medical Journal* for March 6, 1909, that the antidotal power was first questioned. Dr. E. R. Zemp (lococitato) observed that no chemical action took place when the two drugs were brought together; the carbolic acid was simply diluted, hence its caustic power was diminished. Macht (*Johns Hopkins Hospital Bulletin*, XXVI, 1915) demonstrated that the internal use of alcohol in phenol poisoning might be unfavorable. He found that the influence of alcohol depended on the time of administration; if given at once, it might actually hasten death. On the other hand, he found that an animal previously intoxicated with alcohol could withstand better the effects of phenol taken afterward.

Recent experiments undertaken by the Public Health Service clearly show that ethyl alcohol in the presence of water has no appreciable influence on the toxicity or on the germicidal properties of phenol, and that, therefore, it may be advantageously used as a solvent, alone or in mixtures, to promote the solubility of phenol in water for use as a germicide or disinfectant. In the presence of water both alcohol and glycerin are practically inert so far as any detoxicating action is concerned. The results noted suggest the fallacy of enacting legislation designed to promote the sale of mixtures of phenol and alcohol under the impression that ethyl alcohol will serve as a detoxicant to phenol.

The experimental work clearly showed that the addition of ethyl alcohol to phenol not only increased the solubility of phenol in water, but also increased rather than diminished the antiseptic value of the resulting solution. Ethyl alcohol can be used to advantage as a substitute for glycerin in making antiseptic solutions of phenol.

The experiments with animals proved that the addition of ethyl alcohol to solutions of phenol in water does not, in any way, inhibit the toxic action of phenol, but rather tends to facilitate absorption and thus hasten death.

References: *New York Medical Journal*, issues October 19, 1912, and May 20, 1916.

### SYPHILITIC LESIONS.

A. L. Fisher, San Francisco (*Journal A. M. A.*, Feb. 3, 1917), calls attention to the fact that there is a considerable number of syphilitic cases simulating tuberculosis and other bone and joint lesions that escape recognition, and, second, that there is a considerable number of cases of bone and joint syphilis that give negative Wassermann reactions. He has seen at least eighteen cases of these, some of them unmistakable syphilis, within the last year or two. Of the second group, the larger one numerically, the lesions were in and about the joints rather than in the shafts of the bone. Many of the patients had been in institutions or hospitals where their disease had been regarded as tuberculous and treated accordingly. Five cases selected at random are reported in the paper. He asks why we get so many negative Wassermann reactions in bone syphilis. The percentage cannot be given exactly, but it seems at least 10 per cent. Another point that these cases emphasize is that fixation of syphilitic joints neither gives relief nor aids in the cure. Still another point is the large per cent. of children in these cases, eight out of eighteen or really eight out of fourteen under 10 years of age, quite a contrast to the ordinary teaching that syphilitic joints are not common in childhood. Another question that comes up is, what we are to consider as the most reliable test of syphilis? In his opinion it is unquestionably the therapeutic test, and he believes that this should never or almost never be omitted in trying to arrive at a conclusion regarding the nature of a chronic joint infection.

## STRICTURE OF THE BOWEL.

A. A. WILL, M. D., Oklahoma City, Okla.

Stricture of the rectum and large bowel should be defined as any condition which produces a narrowing of the lumen of the gut; with this definition in mind we are able to have a clearer understanding of the etiology, pathology, and treatment of this condition.

For many years the causes given by most authors and writers have been syphilis, malignancy, infection, injuries, etc.

Syphilis is given as the cause in a large percentage of cases, and this teaching has been one of the bug-bears that men doing any work in the intestinal tract have been confronted with, for the simple reason that syphilis considered as the cause per se has led us astray in our prognosis and treatment.

Kelsey and some others have discarded syphilis as the etiological factor and prefer to consider chronic proctitis as the pathology where no other cause is discovered. Kelsey in his article points out that in pyloric stenosis and stricture of appendix that we see very often in operating, syphilis is considered as an infrequent cause.

Stricture of the gut may be divided for convenience of study into annular, valvular, and tubular. The annular form is usually found low down in the rectum and as a rule due to the contraction of a few fibers of the lavator muscle or the circular muscular fibers of the bowel. This contraction usually takes place above some ulceration of the mucous membrane. The contraction of fibers of the muscle of the intestinal wall to my mind explains some of the so-called spasmodic strictures. The spasmodic or simple circular stricture usually disappears when the irritating ulcer or the opening of the fistulas tract is healed. Circular stricture also follows at times the unsuccessful Whitehead operation for piles, due of course to the scar formation.

The valvular form is caused by an encroachment upon the lumen of the bowel. This may be either localized ulceration due to traumatism infection, syphilis or malignancy within the lumen of the bowel. Pressure from without the lumen such as ovarian or tubal abscess and growth in the abdominal or pelvic cavity.

Tubular form of stricture, the one which is most often seen in the hospitals and dispensaries, gives us the greatest amount of concern as to the prognosis and treatment; the prognosis is always bad and the treatment of this condition is doubly hard on account of the hazy idea of the primary cause.

Two per cent of the tubular stricture are congenital, four per cent are due to traumatism, under traumatism as a cause must necessarily be included the use of caustics and also those due to faulty technic in our operations for piles and fistula.

Gant's table shows that about 50 per cent of his cases were syphilitic. Cripp's statistics, in 70 cases, 13 of them were due to syphilis, 30 unassigned, the balance being distributed to other common causes. More recent statistics will show that more cases are due to syphilis, as our laboratory methods have improved very much in the last decade. From all the reports I have been able to read I am of the opinion that at least a large percentage of stricture, more especially tubular form, are due to syphilis, with secondary infection and ulceration.

The generous blood supply of the mucous and submucous coat of the large intestine and especially the rectum, and the fact that the spirochete attacks the vessel walls both early and late in syphilis, almost convinces me that if syphilis is not the predominating cause it should always be taken into consideration.

The main indications in the treatment of stricture of the rectum are to reduce inflammation, induration, ulceration and to enlarge the constricted part of the bowel to such extent that the sufferer may defecate without pain or strain.

First the diet should be regulated so that the smallest amount of residue possi-

ble reaches the colon. Laxatives such as mineral waters and mineral oils will give the best results where laxatives are indicated. Injections of oil above the stricture are always valuable where there is an obstipation or impaction.

The annular stricture is the simplest and usually responds to simple dilation after the cause is removed. The valvular form due to pressure from without the lumen of the bowel yields readily when the pressure is removed.

In outlining the management of a tubular stricture the surgeon is confronted with one of the very serious and most unsatisfactory conditions he has to deal with in his practice. First he must decide, and here all our laboratory facilities are utilized, whether he is dealing with a purely syphilitic or syphilis combined with a secondary infection with the resulting scar tissue due to the simple ulceration.

Next, and not the least important, he must exclude malignancy if his prognosis be favorable.

A number of the proctologists consider any growth or ulceration of the bowel which involves the mucous and submucous membrane and down to the muscular coat as malignant, and treated as such, until the laboratory has proven it to be benign.

This seems to be and is excellent advice if we are able to follow it, but it is very difficult to advise a resection of a rectum when a positive Wassermann is found, although our clinical diagnosis of cancer seems positive.

**Conclusions.** The diagnosis should be confirmed by the laboratory. If the Wassermann is positive, antisyphilitic treatment should be instituted and pushed to the limit for a period not exceeding six weeks, during this period simple dilation can be carried out with soft rubber bougies.

After treatment has been carried out as suggested with no change in caliber of stricture, then I believe a resection of the diseased portion can be advised and should be done in all cases. Under the improved technique of the Mayos and others the operation is fairly simple and curative.

## BONE WORK UNDER LOCAL ANESTHESIA.

W. W. JACKSON, M. D., Vinita, Okla.

### Case Report.

Mr. G., age 42. On March 25 was thrown while attempting to board a freight-train, from which he sustained a comminuted fracture of the left clavicle at the junction of the outer and middle third, with about one and one-half inches of displacement.

Thirty-six hours later it was immobilized with a two inch plate and three screws. The anesthetic used was 1-6 of 1 per cent novocain with four drops of adrenalin to the ounce, with a preliminary hypodermic of 1-6 grain morphine one-half hour before the operation was started.

The external half of the clavicle, including all of the external articulation, was exposed. No step of the procedure caused pain, except the approximation of the fragments by the clamp, when the patient complained of a dragging pain which ceased as soon as the traction was discontinued.

The advantages of doing this sort of work without the use of a general anesthetic are too apparent to warrant discussion.



## PROCEEDINGS OF ST. ANTHONY'S CLINICAL SOCIETY.

DR. A. A. WILL, Pres.

DR. LEILA E. ANDREWS, Sec.

Oklahoma City, March 19, 1917.

**Case 1. Thoracic Actinomycosis.** Drs. Reed and Moorman presented a large, well developed man, aged 40, a cotton buyer and gin operator, who came for relief of pain and swelling in the right chest. Family history unimportant. Past history negative except one period of indigestion relieved by a short stay at Mineral Wells, Texas. Habits good.

Present illness: Two years ago he had pain in the right side and back following a strain from lifting. This gradually subsided after a period of weeks and was given no further thought until last September when he experienced a similar pain following another strain. This time the pain continued with the development of fever and prostration. On October 16, 1916, the right pleural sac was opened with resection of ribs in post axillary line, and a quantity of pus evacuated. Nothing is known of the character of this pus except that patient states that it had a very offensive odor. Drainage ceased in about six weeks and the incision closed.

On December 11, 1916, the patient first entered St. Anthony's Hospital and a physical examination revealed the following: A large, well nourished man, showing moderate loss of flesh. Temperature 99.5, pulse 120, resp. 20, blood pressure S. 160, D. 80. Examination otherwise negative except recent scar at point of resection of rib. A brawny swelling of the right anterior chest wall extending from the axilla to the median line and from the fourth rib to the costal margin. At this time there was dullness at the base of right lung, especially posteriorly, with marked limitation of excursion. This condition gradually grew worse with increasing pain of a peculiar drawing nature, and a daily rise of temperature, 99.5 to 100. An X-ray at this time revealed nothing except a high position of the diaphragm on the right side, thus ruling out intrathoracic accumulations. The blood picture was negative except a slight leukocytosis. Wassermann negative, tuberculin tests negative.

With no definite diagnosis, on January 23rd we decided to search for pus below the diaphragm. With full anesthesia after an unsuccessful search with a needle, an incision was made just below the right costal margin where the tissues were found greatly thickened and indurated. Just when the search seemed hopeless a small fluctuating mass was discovered high up on the inner thoracic wall. This was incised and some necrotic tissue obtained. On February 8th a second incision drained a similar sac external to the ribs directly above the first one with similar findings. Necrotic material from the abscess cavity and sections from the indurated chest wall were sent to Laboratory. All laboratory studies proved negative until on February 16th a third incision became necessary over the lower sternum. With this incision there was an immediate discharge of pus containing many greyish granules about the size of a mustard seed. These granules proved to be characteristic of actinomycosis and a pure culture was obtained in the laboratory, which gave typical microscopic findings.

Immediately the patient was placed on enormous doses of chemically tested potassium iodide (ninety grains in a glass of milk followed by a pint of hot water three times a day) and immediately he began to improve.

Following Ochsner's plan the K. I. was given for three or four days in succession and then discontinued for one week during which time he was given arsenious acid 1-50 of a grain three times a day.

Because of a slight extension of the swelling upward a fourth incision was made on March 26th.

Since the K. I. was started there has been marked improvement in the patient's general condition, a corresponding reduction of temperature and pulse. However, with every round of potassium iodide there seems to be a reaction with increase in pain and in the amount of discharge and a rise in temperature and pulse.

The laboratory produced a vaccine from the fragments of the branching parasite, which is now being administered. The progress of the case seems very satisfactory and though it would be contrary to the usual course of such cases, we are hoping that this one may recover.

This interesting and instructive case was fully discussed. The laboratory findings will be given in detail in the next issue of the Journal.

**Case 2. Unreduced Dislocation of Shoulder.** Shown by Dr. S. R. Cunningham. Man sustained injury to shoulder last October. Came into hospital early this month when an X-ray of shoulder joint revealed the anterior dislocation of the head of the humerus. An incision was made down onto the joint, and the head removed from its false position and placed into the normal position. Passive motion was begun on third day, and today shows a good result.

**Case 3. Injury to Scrotum and Urethra** by fall astride a heavy plank. This man showed a severe and extensive injury with extravasation of urine and blood into the surrounding tissues. The case was shown after the final plastic work had been done on the urethra and perineum. A good result was obtained.

These cases brought out a good discussion.

## ECZEMA.

Eczema of external origin and its relationship to dermatitis, based on a study of 36,996 dermatologic cases, of which 6,453 were classed as eczema, is the subject of an article by F. C. Knowles, Philadelphia (*Journal A. M. A.*, Jan. 13, 1917), in which he argues for the identity of the two conditions eczema and dermatitis. The cases used were classed as eczema because of their chronicity as to course, lasting over weeks and months, though most of them were exceedingly acute in their clinical appearance. Hundreds of other cases were diagnosed as dermatitis in the same hospital, especially those attributable to plant poisoning or acute irritants in which the outbreak ran a rapid course to recovery. Eczema as studied may be conveniently divided into three classes: those of parasitic origin, those from external irritants, exclusive of occupation, and trade eczemas. Many excellent observers have studied the parasitology. There is no definite evidence that organisms in or on the skin are causal of eczema, though cocci no doubt have a decided influence in causing secondary lesions and complications. The parasitology of the disease is summed up in the statement that the majority of dermatologists do not regard eczema as parasitic or due to any specific organism, but the belief is general that bacteria may play an important part in the evolution of the lesions. Eczema of external origin, exclusive of occupation, may be produced by any irritant in a susceptible person, or by prolonged or frequent exposures to an irritating factor in those predisposed. We are all familiar with the many factors which cause an outbreak; such as iodoform, hair dyes, dyed fur and cosmetics. Numerous cases of these and other causal factors involved are familiar to us, especially in the cosmetics, etc. Trade eczemas form the subject for many articles. In a former publication referred to by the author, twenty-nine different trade groups were tabulated, in which various irritants were causative, in house workers, laborers, woodworkers, photographers, printers, painters, etc. Nomenclature, Knowles says, is one of the greatest faults of dermatology. There is no more chaotic subject than that of exactly what eczema is, and the dividing line between this affection and dermatitis. A number of authorities are quoted expressing the opinion that eczema is a simple dermatitis, and the study of hundreds of cases with a perusal of the literature forces the conclusion that it is practically impossible to distinguish between dermatitis and eczema of external causation. If the outbreak is caused by certain irritants such as plants, we call it dermatitis, if by certain other irritants, eczema. If of short duration and known cause we call it dermatitis, if of long duration, we call it eczema. The clinical feature may be the same in both.

## A STUDY OF NATIONAL DEFENSE AND MEDICAL PREPAREDNESS

### Medical Preparedness.

Under existing conditions it is desirable that every physician as well as every other loyal citizen of America should be prepared to render active service to the Federal Government, remembering that the protection afforded by the Government has made it possible for its citizens to enjoy liberty, peace and prosperity.

The avenue through which the most effective service can be rendered by members of the medical profession have taken definite and concrete form. Briefly, the plan is that all medical activities should cooperate with the Council of National Defense. It would seem desirable at this time to state explicitly just what the Council of National Defense and its various agencies are.

The Council of National Defense was created by Act of Congress, August 29th, 1916.

"Sec. 2. That a Council of National Defense is hereby established, for the coordination of industries and resources for the national security and welfare, to consist of the Secretary of War, the Secretary of the Navy, the Secretary of the Interior, the Secretary of Agriculture, the Secretary of Commerce, and the Secretary of Labor.

That the Council of National Defense shall nominate to the President, and the President shall appoint, an advisory commission, consisting of not more than seven persons, each of whom shall have special knowledge of some industry, public utility, or the development of some natural resource, or be otherwise specially qualified, in the opinion of the council, for the performance of the duties hereinafter provided. \* \* \* \* \*

That the Council of National Defense shall adopt rules and regulations for the conduct of its work, which rules and regulations shall be subject to the approval of the President, and shall provide for the work of the advisory commission to the end that the special knowledge of such commission may be developed by suitable investigation, research, and inquiry and made available in conference and report for the use of the council; and the council may organize subordinate bodies for its assistance in special investigations, either by the employment of experts or by the creation of committees of specially qualified persons to serve without compensation, but to direct the investigations of experts so employed."

A committee of distinguished physicians was asked to present to the President, names of medical men suitable for membership on the advisory commission. Dr. Franklin H. Martin of Chicago was selected Chairman.

The following statement was issued by President Wilson on the night of October 11, 1916, in announcing his appointment of the civilian advisory members of the Council of National Defense:

"The Council of National Defense has been created because the Congress has realized that the country is best prepared for war when thoroughly prepared for peace. From an economic point of view there is now very little difference between the machinery required for commercial efficiency and that required for military purposes.

In both cases the whole industrial mechanism must be organized in the most effective way. Upon this conception of the national welfare the council is organized in the words of the act for 'the creation of relations which will render possible in time of need the immediate concentration and utilization of the resources of the nation.'

The organization of the council likewise opens up a new and direct channel of communication and cooperation between business and scientific men and all departments of the government, and it is hoped that it will in addition become a rallying point for civic bodies working for the national defense. The council's chief functions are:



1. The coordination of all forms of transportation and the development of means of transportation to meet the military, industrial and commercial needs of the nation.

2. The extension of the industrial mobilization work of the Committee on Industrial Preparedness of the Naval Consulting Board and complete information as to our present manufacturing and producing facilities adaptable to many sided uses of modern warfare will be procured, analyzed and made use of.

One of the objects of the council will be to inform American manufacturers as to the part which they can and must play in national emergency. It is empowered to establish at once and maintain through subordinate bodies of specially qualified persons an auxiliary organization composed of men of the best creative and administrative capacity, capable of mobilizing to the utmost the resources of the country.

The personnel of the council's advisory members, appointed without regard to party, marks the entrance of the non-partisan engineer and professional man into American governmental affairs on a wider scale than ever before. It is responsive to the increased demand for and need of business organization in public matters and for the presence there of the best specialists in their respective fields. In the present instance the time of some of the members of the Advisory Board could not be purchased. They serve the government without remuneration, efficiency being their sole object and Americanism their only motive."

As indicated above the Council of National Defence therefore consists of six members of the Cabinet as follows: The Secretary of War, Chairman; The Secretary of the Navy; The Secretary of the Interior; The Secretary of Agriculture; The Secretary of Commerce; The Secretary of Labor.

The Advisory Commission of the Council of National Defense consists of seven civilians appointed by the President. The members of the Advisory Commission are as follows: Mr. Daniel Willard, President of the Baltimore and Ohio Railroad, Chairman; Mr. Hollis Godfrey, LL. D., President of Drexel Institute, Philadelphia, Pa.; Mr. Howard E. Coffin, of Detroit, (who is also chairman of the Committee on Industrial Preparedness of the Naval Consulting Board); Dr. Franklin H. Martin, of Chicago; Mr. Bernard Baruch, Financier, of New York; Mr. Julius Rosanwald, Vice-President of Sears, Roebuck & Company, of Chicago; Mr. Samuel Gompers, President of the Federation of Labor.

The two bodies meet in joint session at frequent intervals for the purpose of considering problems relating to national defense.

The executive activities of the Council of National Defense are coordinated and carried out through the medium of the Director of the Council of National Defense, Mr. W. S. Gifford, and the chiefs of the various departments represented by the members of the Advisory Commission. Dr. Frank F. Simpson is chief of the Medical Section of the Council of National Defense.

### **The Advisory Commission.**

The organization of the Council and of the Advisory Commission provides that each member of the Advisory Commission shall gather about himself for the most effective coordination of the activities he represents, a committee or board consisting of representatives of governmental departments on the one hand, and civilian members on the other hand.

The Medical Committee, of which Dr. Franklin H. Martin is Chairman, consists of: Wm. C. Gorgas, Surgeon General of the U. S. Army; Wm. C. Braisted, Surgeon General of the U. S. Navy; Rupert Blue, Surgeon General of the U. S. Public Health Service; Col. Jefferson R. Kean, Director General of Military Relief of the American Red Cross; Dr. Wm. H. Welch, member of the National Council of Research; Dr. Wm. J. Mayo, Chairman of the Committee of American Physi-

cians for Medical Preparedness; Dr. Frank F. Simpson, Chief of the Medical Section of the Council of National Defense, and Secretary of the Committee of American Physicians for Medical Preparedness.

Many medical problems which have bearing upon the national defense are considered by Dr. Martin's Committee and by the Advisory Commission and the Council of National Defense before being put into action by the governmental departments concerned.

### **Committee of American Physicians for Medical Preparedness— Its Component Parts.**

#### **National and State Committees.**

In April, 1916, the national committee was appointed by the joint action of the presidents of the American Medical Association, the American Surgical Association, the Congress of American Physicians and Surgeons, the Clinical Congress of Surgeons of North America, and the American College of Surgeons. To that committee was delegated the responsible duty of formulating plans whereby the civilian medical resources of the United States as might be ascertained and effectively coordinated for such purpose might be required by the Federal Government.

The national committee organized, selected a chairman and secretary and an executive committee, and appointed a state committee of nine strong men in each state of the Union.

It is the fixed policy of this committee that all presidents and secretaries of the various state medical societies shall be members of their respective state committees during their incumbency in office. From the first it was contemplated that at the proper time the organization of committees would be perfected in each county of the country. That time has now come and county committees are being rapidly organized.

In each instance the state committees are expected to select the county committees and to supervise their formation.

#### **Name and Personnel of County Committees.**

It is the fixed policy of the Committee of American Physicians for Medical Preparedness that the various important medical interests and activities of each county shall be represented on the county committees. This is done for the purpose of coordinating the important interests and activities so that the medical profession of the nation may present a compact and effective organization for the purpose of aiding effectively in the national defense. In order that this plan may be carried out with uniformity and precision throughout the country, the various state committees have been requested to have all county committees bear the following distinguishing name, to-wit: The Auxiliary Medical Defense Committee of \_\_\_\_\_ County, in \_\_\_\_\_ State. The state committees have also been requested to provide that the county committees shall include the following in their list of members:

1. All members of National Committee of the Committee of American Physicians for Medical Preparedness, resident in the individual county.
2. Members of the State Committee resident in or near the individual county.
5. Representatives of the U. S. Army resident in the individual county.
3. Representatives of the U. S. Navy resident in the individual county.
4. Representatives of the U. S. Public Health Service resident in the individual county.
6. Representatives of the State Board of Medical Examiners residing in the individual county.
7. Representatives of the State or City Public Health Service.
8. Ranking medical officer of the National Guard.
9. President and Secretary of the local Medical Officers' Reserve Corps Association, if there should be such an organization.

10. Deans of medical schools.
11. Presidents and Secretary of the County Medical Society.
12. President and Secretary of any other important medical societies.
13. Medical Director of the local Red Cross Units.
14. Other representative medical men.

#### **Duties of County Committees.**

From time to time specific duties will be assigned to the various State and county committees. These duties will be in accord with the policy of the Council of National Defense, and should be executed promptly and precisely by those who are called upon to cooperate in this manner with the Council of National Defense. The committees will call to their assistance those who have been appointed field aides by their various state committees and such other physicians as they may desire to have cooperate with them.

Among the specific duties which the county committees are requested to perform at this time are the following:

First: That these committees cooperate with the National and State Committees of the Committee of American Physicians for Medical Preparedness in their efforts to gain needful information regarding the civilian medical resources of their own communities, and in their efforts to coordinate civilian medical activities for prompt mobilization in case of need.

Second: That they secure applicants: (a) For the Army Medical Corps. If the President should call the full complement of troops already authorized by Congress, the Regular Army would need about 1,200 additional medical officers. If a million men should be called, a corresponding increase would be required. (b) For the Medical Officers' Reserve Corps. If war should come, 20,000 to 30,000 medical Reserve officers should be enrolled. (c) For the Naval Medical Corps which needs about 350 additional officers. (d) For the Coast Defense Reserve Corps of the Navy. Several hundred high class reserve medical officers are desired. (e) For the National Guard, such numbers as may be required to bring your local National Guard to full strength.

In the preparation for National Defense the first thing needed will be medical officers. Physicians recommended for such service should be of the highest type. They should be free from suspicion of addiction to drugs or drink. Medical officers who go to field duty should by preference be under the age of forty-five.

Third: That they cooperate, individually and collectively, with the Medical Department of the Army, Navy and Public Health Service and with the Council of National Defense.

Fourth: That they cooperate with the Red Cross in their efforts to bring that organization to the highest point of efficiency.

#### **Committee of American Physicians—Activities Accomplished and in Progress.**

On the 26th of April, 1916, the Executive Committee of the Committee of American Physicians tendered the services of the committee to the President of the United States. He expressed himself as being pleased with the patriotic tender of services and regretted that existing laws did not permit the acceptance by the Federal Government of gratuitous services, but stated that the matter would be referred to the Secretary of War and the Secretary of the Navy for the purpose of devising plans by which the good offices of the medical profession could be accepted and utilized to best effect by the Federal Government. He further stated that the plans would be referred to the Committee of American Physicians for comments and suggestions. The Executive Committee was permitted to make suggestions regarding the bill creating the Council of National Defense.

During the last year this Committee and its various subsidiary bodies have been actively engaged in formulating and carrying out various activities in con-



formity with the general plans for national defense, which have been undertaken by the Federal Government.

The splendid work done by the various state and other committees was of such extent and value that the Council of National Defense at its first meeting requested the Committee of American Physicians to continue their various activities under the guidance of the Council of National Defense, and asked the Secretary of the Committee of American Physicians to act as chief of the Medical Section of the Council of National Defense. Since that time the various activities have gone forward with renewed energy.

Some of the activities which have either been completed or are well under way, follow:

1st. Some 20,000 medical men selected from all parts of the country have been classified according to the training and the kinds of work which they do best.

2nd. An inventory of hospitals and other medical institutions is well under way.

3rd. It has been the fixed policy of the Committee of American Physicians to aid the American Red Cross in bringing its medical department to the highest point of efficiency. With that object in view, and in order to foster the spirit of cooperation, the members of the National Committee of the Committee of American Physicians accepted invitations to become members of the national committee of the medical department of the American Red Cross. In order further to promote the harmonious cooperation of the two organizations, most of the members of the various state committees of the Committee of American Physicians were also made members of the state committees of the American Red Cross. The various county committees will also be expected to cooperate in carrying out the plans of the two organizations.

4th. The establishment of military training for senior medical students in a large percentage of the high grade medical schools of the country.

5th. The establishment of more effective military training for hospital groups for members of the Medical Officers Reserve Corps, for dental students and others.

6th. The appointment of a Committee for the Standardization of Medical and Surgical Supplies and Equipment. The purpose of this work is to designate a list of articles essential to the successful conduct of civilian and military medical and surgical activities so that in the event that it should become necessary to curtail production all of the energies of the drug and instrument makers would be devoted to necessary articles rather than to those which are desirable but not essential. On this Standardization Committee are representatives of the Army, the Navy, the Public Health Service, the Red Cross, the Council of National Defense and a number of the most distinguished members of the various specialties of civilian medicine. In their work of coordination and standardization this Committee will take council with the manufacturers of the various supplies under consideration.

7th. Much valuable information supplied by medical and other observers who have worked in the war zones of Europe is being gathered and classified.

8th. The Presidents of important national medical organizations of the country have been requested to suggest to the medical section of the Council of National Defense the kinds of work which members of those organizations are best fitted to perform, and to suggest plans whereby their activities and resources might be utilized to best advantage. This request does not contemplate an inventory and organization of these resources. The purpose is that having received suggestions offered by the various organizations, those suggestions will be maturely considered and such as conform to the plans of the Council of National Defense and can be utilized to advantage, will be adopted. The various organizations will, in that case, be requested to cooperate fully and promptly in perfecting the plans of the Council of National Defense.

The foregoing memorandum embodies only a very small percentage of the problems now under consideration. It is neither wise nor desirable, however, to present them in detail at this time.

# JOURNAL OF THE OKLAHOMA STATE MEDICAL ASSOCIATION

VOLUME X

MAY, 1917

NUMBER 5

PUBLISHED MONTHLY AT MUSKOGEE, OKLA., UNDER DIRECTION OF THE COUNCIL

DR. CLAUDE A. THOMPSON, EDITOR-IN-CHIEF

ENTERED AT THE POSTOFFICE AT MUSKOGEE, OKLAHOMA AS SECOND CLASS MAIL MATTER, JULY 28, 1912

THIS IS THE OFFICIAL JOURNAL OF THE OKLAHOMA STATE MEDICAL ASSOCIATION. ALL COMMUNICATIONS SHOULD BE ADDRESSED TO THE JOURNAL OF THE OKLAHOMA STATE MEDICAL ASSOCIATION, BARNES BUILDING, MUSKOGEE, OKLAHOMA.

The editorial department is not responsible for the opinions expressed in the original articles of contributors.

Reprints of original articles will be supplied at actual cost, provided request for them is attached to manuscript or made in sufficient time before publication.

Articles sent this Journal for publication and all those read at the annual meetings of the State Association are the sole property of this Journal. The Journal relies on each individual contributor's strict adherence to this well-known rule of medical journalism. In the event an article sent this Journal for publication is published before appearance in the Journal, the manuscript will be returned to the writer.

Failure to receive the Journal should call for immediate notification of the editor, 507 Barnes Building, Muskogee, Okla.

Local news of possible interest to the medical profession, notes on removals, changes in address, deaths and weddings will be gratefully received.

Advertising of articles, drugs or compounds not approved by the Council on Pharmacy of the A. M. A. will not be accepted.

Advertising rates will be supplied on application. It is suggested that wherever possible members of the State Association should patronize our advertisers in preference to others as a matter of fair reciprocity.

## EDITORIAL

### THE WAR TASK CONFRONTING OKLAHOMA PHYSICIANS.

Elsewhere in this issue is published a complete suggestion in detail of organizations that may be effected by our profession in the face of our present great National crisis. A close study of this is invited by the Council of National Defense and it should be the duty of all of us to give our best thought and energy in assisting to our utmost the furtherance of the National welfare.

Many Oklahoma physicians are already attached to the Medical Reserve Corps, some of them have seen considerable service and at this time their aid should be invaluable. The requirements will, however, be much more than one yet appreciates, and especially so if our coppery neighbors to the south, assisted by no inconsiderable number of German Reservists scattered over Mexico and the South American countries, conclude to give us trouble; so it behooves us to plan, and plan well, for all possible contingencies.

Those physicians who go to the front will do so at a sacrifice. They will make decidedly less money, many of them less than their families need and are accustomed to. To those every help should be extended. Their various appointments should be carefully guarded to their safe return to civil life and no advantage taken of their absence while they are "doing their bit" for the National cause.

The Council of National Defense estimate that between 20,000 and 30,000 additional physicians will be needed to properly care for the various branches of the service during the war and they ask us to cooperate in this with all our energy and vigor. We must not and will not be found wanting. There is work for all, whether we go to the front or remain at home. Several years of prosperity has given our people a false and ruinous attitude on matters of economy, such as will be demanded in order to properly meet the problems of a great war. No one sees through the shams and artificialities of daily life as quickly as the physician and he is in position as a consequence to assist the people in abstaining from extravagances incident to prosperous times. In every county in Oklahoma the physician should lead in preventing waste and conserving National resources. Waste should be eliminated to the last degree. Thousands of men who create wealth by their

labor, growing cattle and food for hundreds of thousands will be called away from their tasks to take up the burden of National Defense and their work at home must be taken up by unfamiliar hands. We must meet that situation and we will.

The public health should be conserved, for a sick people cannot work. All waste possible in that respect should be eliminated. The physician is in position to inform the people of the loss to the National cause by unnecessary and avoidable illness.

We are faced with no light task. We must face the problems with courage and common sense. The way of the soldier physician is not strewn with the glamour and plaudits popularly accorded other branches, but we will meet the situation with the calm serenity that follows the knowledge that our's is a just cause. Let every man do his duty to his people and the Nation and armed with the words of the great Abraham Lincoln exclaim, "Let us have faith that right makes might, and in that faith let us, to the end, dare to do our duty as we understand it."

---

### THE NEW VITAL STATISTICS LAW.

Elsewhere is published the full text of the vital statistics law enacted by the last legislature to comply with the requirements of the Federal Government in order that such statistics gathered from Oklahoma may hereafter be in conformity with the National idea and included in their general registration scheme.

It is of equal interest to every physician to carefully read these rules and conform to them. Hereafter the neglect to report births and deaths so prevalent in some communities will not be tolerated; on the contrary such neglect will be followed by certain trouble for the offender. The law goes into effect about the middle of June, 90 days after adjournment of the legislature. For the saving of space that portion devoted to description of the blanks to be used is here omitted as they are identical with those now in use.

---

### OUR GOOD YEAR OF 1916-1917.

This fiscal year, closed April 30, 1917, has been the most prosperous ever experienced by our Association. A detailed report of all activities will be rendered the House of Delegates at Lawton-Medicine Park. It cannot be said, of course, what the next few years will bring us in that respect, for war conditions will certainly have some effect on every person and thing in the United States; so it stands us to carefully estimate demands and needs and alter our system to properly meet whatever may be demanded in the way of expansion, retrenchment or sacrifice.

---

### THE MODERN TREATMENT OF TETANUS.

It is extremely probable that within a few weeks Oklahoma surgeons will be called upon to exercise their ingenuity and resourcefulness on the problem of war. One of the frightful contingencies of war wounds is tetanus. Nearly never developing in the face of prompt prophylaxis, extremely resistant to any but the most thorough treatment after initiation, even then very doubtful of outcome, its final fatal termination is certainly one of the most gruesome sights the attending surgeon is called to witness and one that stimulates the attendant to his utmost, first as to prevention, secondly as to efficient treatment after inauguration.

Two promising advances have been recently made for its control. Perhaps they should be jointly used. Insufficient treatment is as useless as insufficient treatment is in many other infections, notably meningitis, diphtheria and syphilis.

Meltzer's intraspinal injections of magnesium sulphate solutions, 25 per cent strength, 1 cc. of solution for each 20 pounds of weight, under slight general anesthesia, which must be promptly withdrawn after completion of injection, has given



remarkable results. It is said complete relaxation soon occurs, maintained for 24 hours, before the expiration of which another smaller dose of 0.8 cc. should be given. It is also recommended to be used intravenously in slightly increased dosage.

Intraspinal injections of antitoxin, after withdrawal of 20 to 30 cc. spinal fluid, 5,000 units daily or oftener in severe cases, according to clinical records, has more lives to its credit than any other procedure. The treatment should be maintained for five or six days, each case being a law unto itself.

No other coordinate aid to treatment should be neglected. The wound or focus of infection, if in reach, should be thoroughly cleaned by enlargement and introduction of permanganate solutions and cleansing deeply with peroxide solutions. The danger of the slight, deep, enclosed and encysted wound should not be forgotten. The importance of this will be realized in the information from French surgeons reporting occurrence 145 days after receipt of slight scalp wounds from missiles, which had become encysted and secondarily breaking down from irritation which released the very resistant infection to the general circulation.

A remarkable fact to remember in handling these wounds is the resistance of the infection to the ordinary means of sterilization. If there is an infection, exposure to which should call for care, it is certainly tetanus, sterilization, re and triple should be the routine. This especially applies to all instruments and other materials coming in contact with the patient.

A summing up of recent literature in the light of the European war convinces one that much may be hoped for in prompt treatment, but that means everything efficiency and sufficiency implies.

## CURRENT MEDICAL LITERATURE

Conducted by

DRS. CURT von WEDEL, Jr., and L. J. MOORMAN, Oklahoma City  
and FRED J. WILKIEMEYER, Muskogee

### VALUE OF GENU-PECTORAL POSITION FOR BASTEDO'S SIGN IN CHRONIC APPENDICITIS.

(March Southern Medical Journal, by J. D. S. Davis.)

In this article, Davis explains why Bastedo's sign is often not elicited in chronic appendicitis. It is very difficult to force air high enough into the colon to reach the cecum without considerable distress, unless the patient be put in a genu-pectoral position. He injects air into a rectal tube with an ordinary politzer bag, with the patient in the genu-pectoral position, following the air around the colon by palpation, and he has been able to elicit definite severe, localized pain over the right iliac region, both on palpation with the patient on his back, or in the aforesaid position. von Wedel.

### THE TREND OF SURGERY IN EMPYEMA OF THORAX.

(March Annals of Surgery, by Martin W. Ware.)

Following the basis of chest surgery laid down by Howard Lilienthal in an article before the American Surgical Association, he said, "In my other thoracic work, I had noted the wonderful exposure by wide rib retraction through a long intercostal incision, and I adopted this operative principle as a primary evolutionary move in thoracic work." On the basis of this statement, Ware advocates extensive rib retraction and drainage through a thoracotomy opening. He makes the incision close to the upper margin of the lower rib, thereby avoiding troublesome intercostal hemorrhage, isolating and ligating the vessels. He advocates routine X-ray in all chest cases, large openings, as by this means extensive drainage is often not necessary. He states that lung expansion is fostered by forced respiration with James' bottles, etc. He quotes a most interestingly low mortality—a little less than 5 per cent which is certainly unusual. von Wedel.

### THE SIGNIFICANCE OF THE PATULOUS APPENDIX.

(March Annals of Surgery, by J. W. Squires.)

Squires, in this article, differentiates between the various forms of appendicitis by means of the X-ray. He states emphatically a fact which we all know, "A poorly drained appendix is a dangerous one." He states that roentgenographically, a patulous appendix combined with a history of gastrointestinal disturbance and hyperacidity, the weight of evidence would be sufficient to place the blame

on the appendix. The sequelae to a long standing patulous appendix are many—gastric or duodenal ulcer, chronic infections of the gall-bladder, etc. In his conclusion, he states: First, there is a roentgenological symptom syndrome associated with the patulous appendix, the detection of which is sufficient evidence of an abnormal appendix. Second, a patulous appendix, even though its drainage is good, is abnormal. Third, the roentgenological evidence of the damage being done by the patulous appendix is present in both the stomach and ileocecal region.

von Wedel.

#### ARTIFICIAL CELL PROLIFERATION WITH HORSE SERUM IN THE TREATMENT OF BURNS.

(March Annals of Surgery, by Edward Percy Robinson.)

Robinson quotes a very interesting case of extensive burn of the body, the devitalized skin area exceeding one-third of the entire surface. This case was treated with horse serum applied directly to the wound. The horse serum was commenced the tenth day after admission to the hospital, and used by spraying it directly on the marginal edges—the parts being then covered with rubber tissue. The patient was discharged completely healed 21 days after admission, which was truly remarkable. He states that in view of this, he believes it is not the best policy to open the blebs, but to allow this sterile serum, protected by skin covering, to stimulate and nourish the marginal epithelial cells.

von Wedel.

#### BUTTERMILK MIXTURE FOR INFANT FEEDING.

Dr. Julius Brady, Professor of Diseases of Children, at the St. Louis University, and Pediatricist to the St. Ann's Lying-In and Orphan Asylum, says: His mortality in his feeders have been practically nil since using a buttermilk mixture. This is recommended where normal infants do not seem to tolerate cow's milk.

Mixture No. 1: 3-4 quarts of skimmed buttermilk, 1-4 quart of barley gruel (1 ounce barley flour to be used in making this gruel), 1 ounce of Mellin's Food (by measure), 1-2 ounce of cane sugar (by measure).

The ingredients are mixed together in the following manner: To the barley gruel is added the cane sugar, plus Mellin's Food, plus buttermilk and the mixture strained. This mixture is for young infants and requires four ounces to each pound of body weight.

**Example:** Infant three months old, weight eleven pounds, would require 44 ounces in twenty-four hours for the sufficient number of calories.

For older infants buttermilk mixture No. 2 is used: 2-3 quart of whole buttermilk, 1-3 quart barley gruel, 1 ounce cane sugar. This is to be used in the same manner as mixture No. 1.

C. V. Rice.

### PERSONAL AND GENERAL NEWS

Dr. A. R. Havens, Nardin, has moved to Blackwell.

Dr. Walter Penquite, Chickasha, was quite ill in March.

Dr. M. Karasek, Drumright, has returned from a visit to Chicago.

Dr. H. A. Lile, Aline, has been sick for sometime with rheumatism.

Dr. N. M. Simpson, Henryetta, is in Tulane University, New Orleans.

Dr. C. M. Pratt, Maysville, is in New Orleans doing post-graduate work.

Dr. C. R. Phelps, Oklahoma City, returned from New York City in March.

Dr. Onis Franklin, Broken Arrow, is in New Orleans doing post-graduate work.

Dr. R. E. L. Rhodes, Tulsa, has been appointed county physician of Tulsa County.

Dr. W. E. Lamerton, Enid, returned from Chicago post-graduate work the last of March.

Dr. J. C. Dickerson has located in Guthrie to do special work in eye, ear, nose and throat.

Dr. and Mrs. Lee W. Cotton, Enid, celebrated their 28th wedding anniversary, April 18th.

Dr. L. T. Lancaster, Cherokee, returned from Chicago the last of March, after visiting the clinics.

Dr. and Mrs. G. W. Griffin, Norman, celebrated their 15th wedding anniversary on March 26.

Drs. E. W. Reynolds and J. J. Nabham of Bristow have returned from border service with the Medical Reserve Corps.

Dr. Hugh Scott of Ft. Kamehameha, Honolulu, attached to the Medical Reserve Corps, has resumed practice in Dustin.

Dr. C. W. Austin, Granite, was painfully injured when his car turned over near Brinkman. The car ran into a pile of rock near a turn in the road.

Dr. J. E. Arrington, Frederick, has been appointed county superintendent of public health for Tillman County, vice Dr. G. H. Hansen, deceased.

Dr. A. Ray Wiley, Tulsa, is now connected with the House Staff of the New York Polyclinic, where he will remain for two years as resident interne.

**Dr. J. B. Haggard**, for several years a resident of South Coffeyville, has sold out and will seek a new location. For the time Dr. Haggard will visit the Rochester Clinics.

**Dr. W. W. Jackson**, Vinita, escaped serious injuries when his car running at a rather rapid rate overturned. He was pinned underneath and had to be liberated by nearby workmen.

**Dr. and Mrs. J. C. Watkins**, Chccotah, have gone to Chicago where they will remain six months. Dr. Watkins will do pathological and surgical work after which they will return to their old location.

**Lawton physicians** have perfected a plan by which it is hoped to raise \$25,000 for the purpose of erecting a doctor's home at Medicine Park, similar to that now owned and operated by the State Editorial Association.

**Dr. T. F. Harrison and Miss Penny Williams** of Wewoka were married March first, departing immediately to attend the inaugural services at Washington. They go from there to New York where Dr. Harrison will do special work in the Post Graduate School.

**Tulsa citizens** have raised a fund of \$311,775 for the purpose of erecting St. John's Hospital. The institution will be operated by the Sister of Sorrowful Mother, a sisterhood of the Catholic Church. When completed this will be one of the greatest hospitals in the state.

**Dr. John W. Duke**, State Commissioner of Health, announces that the laboratory is now prepared to do Wassermann's. It is requested that samples for examination be sent to arrive on Mondays and Tuesdays until further notice. Special tubes for securing blood will be mailed on request.

**The Senior Class** of the Medical Department of the University, with one exception, took the State Board examination at Oklahoma City, April 10. They were granted this early examination in order that they might join the army earlier than if they had to wait until the regular July examinations.

**Special instruction** on account of the war situation will be given to physicians from any part of Oklahoma by the University Medical Department. Dr. LeRoy Long, Dean, has secured the services of an army surgeon for that purpose. Drs. L. H. Buxton, W. E. Dicken, Horace Reed, A. L. Blesh, L. J. Moorman, F. B. Sorgatz, Floyd Bolend and LeRoy Long are the local physicians who will especially cooperate in this work.

**Chiropractic Gets Army Assignment?** An Oklahoma Chiropractor, according to the press, wired the Surgeon General about as follows: "I offer my services as a chiropractor in non-surgical cases, etc." It is said some joker almost got by the city editor with the following reply: "Washington, March—, Chiropractor, Muskogee. Your offer as a chiropractor in non-surgical cases received. You will prepare at once for service in the Molokai, Hawaiian Leper Hospital or the Tampa smallpox hospital, your choice. Blue, Surgeon General."

**Dr. Charles Blickensderfer**, Shawnee, was instantly killed when his automobile turned over as he was hurrying to make a call. Dr. Blickensderfer was born in Tuscarawas County, Ohio, December 31, 1866. He was educated at the University of Pennsylvania and was engaged in railroad construction work as a civil engineer in the West for several years, after which he entered the Medical Department of the University of Tennessee where he was graduated. In that school he was lecturer on materia medica and clinical instructor in general surgery. He located at Tecumseh twenty years ago, six years ago moving to Shawnee as local surgeon of the Rock Island. He was later made division surgeon of the Rock Island, local surgeon for the M. K. & T. and Santa Fe and surgeon for the Shawnee Street Railway. Dr. Blickensderfer was one of the really able men in our profession. His death is a distinct loss to the profession in Pottawatomie county and this state.

## SOCIETIES

**The Sapulpa City Medical Society** has officially noted the high cost of living and as a result, has raised its fees for professional services generally.

**The Nowata County Medical Society** is attempting to perfect plans for the formation of a County Hospital Association. The object of the plan is to erect a \$25,000.00 hospital building.

**Tillman County Medical Society** met in Frederick April 11 with the following program: Clinics by Tillman County Physicians; Papers were read by Drs. J. M. Bonham, Hobart; D. L. Garrett, Altus; Address by Dr. LeRoy Long, Oklahoma City. The visiting physicians and their wives were tendered a banquet.

**The Northeastern District Medical Society** met in Vinita, April 19, about 50 members attending. After a short business meeting in which Drs. F. L. Hughson, Vinita, and R. V. Smith, Tulsa, were elected President and Secretary-Treasurer, respectively, and an invitation was extended to meet in the laboratory of Dr. Walter E. Wright, Tulsa, for the next meeting; all day clinics were held at the Northeastern State Hospital. The clinics were arranged by Drs. F. M. Adams, Superintendent of the Hospital and Louis Bagby and P. L. Hayes. Surgical clinics were held by Drs. G. A. Wall, of Tulsa, and C. S. Neer, Vinita, and the Neurological clinic was held by Drs. C. J. Fishman, Oklahoma City, and F. M. Adams, Vinita. Luncheon was served at the hospital for the visiting physicians.

**Central Oklahoma Medical Society** met in Oklahoma City April 10, the morning being devoted to clinics at St. Anthony's, State University, University Emergency, Baptist and Wesley Hospitals. After noonday lunch at the First Presbyterian Church, the following papers on medical subjects were read and discussed: "The Medical Department of the Officer's Reserve Corps", Captain Robert Whit-



field, U. S. A. Recruiting Officer; "Some Observations of Foetal Infections," Dr. A. B. Leeds, Chickasha; "Immediate Repair Work in Fractures," Dr. George McLean, Oklahoma City; "Involvement of the Central Nervous System in Syphilis," Dr. D. D. Paulus, Oklahoma City; "Treatment of Cerebro-Spinal Syphilis," Dr. Rex Bolend, Oklahoma City; "Hygiene and Sanitation," Dr. L. W. Cotton, Enid; "Fracture of the Base of the Skull," Dr. Curt von Wedel, Oklahoma City; "New Medical and Health Legislation," Dr. John W. Duke, Guthrie.

**Muskogee County Medical Society** met April 9. The papers of the evening were: "War Surgery," Dr. J. I. Hollingsworth, illustrating personal experiences in the Mexican Revolution; "Thyroid in Uterine Hemorrhage," Dr. O. C. Klass. At another meeting on April 23, Dr. C. V. Rice, presented a clinical case of congenital syphilis, closely resembling rickets, complicated with empyema. Dr. C. W. Heitzman read a paper on "Sick Headache." A resolution unanimously endorsed the selective draft system as reported by the Senate Military Committee and copies were ordered sent senatorial and congressional representatives. A resolution was adopted asking that the patent on salvarsan and similar substances be abrogated. It was resolved that in the event any member of the Muskogee County Medical Society should go to war, his practice should be cared for by the remaining doctors in his absence and one-third of the receipts be turned over to him. It was also resolved to give free service to the dependent members of families of any enlisted men who were dependent on the absentee's war salary for support. A proposition was received from representatives of the Oklahoma Baptist Hospital Association which Association agrees to make a \$30,000 addition to the present Baptist Hospital, provided the citizens of Muskogee raise a fund to clear the indebtedness of the institution, which amounts to about \$4,000. The proposition was favorably received and a committee was ordered to recommend to the Greater Muskogee Association that every aid be given the proposition of the Association. A committee of three was appointed to investigate the Miners' Hospital proposition, which in substance proposes to establish an exclusive hospital for Miners and their families.

**Oklahoma County Society** has recently ordered the following mailed to each member:

Dear Doctor:

Charges are being made that some of our members are violating the following Amendment to our Constitution and By-Laws which was adopted January 13, 1912:

*Resolved* that the Oklahoma County Medical Association hereby condemns the practice of Division of fees as being contrary to the principles of ethics which we have adopted as our standard. We, therefore, declare it unethical and unprofessional.

*Resolved* that if, hereafter, a member of this Society is found guilty of giving or receiving fees within the meaning of the term "Secret Division of Fees" and "Fee Splitting without the Patient's Knowledge and Consent," he or she shall be reprimanded, suspended or expelled from Membership in the Society, according to the Rules and Regulations prescribed by our Constitution and By-Laws.

*Resolved* that, in case of expulsion or suspension of a member of this Society for Fee Splitting that due publicity be given the same in the Journal of the State Association.

*Resolved* further, that with the Adoption of this Report, all previous action of the Society bearing on this subject be rescinded.

At the last meeting of the Society the Secretary was directed to send a letter to each member of the Society, calling attention to these charges and asking the co-operation of the members of the Society in finding out the truth of this matter.

If any member of this Society has knowledge of the practice of the violation of this resolution it is his duty to himself, to the Society and to the community to lay the facts before the Secretary so that charges may be preferred and the malefactor punished.

Your earnest support and co-operation is desired.

Fraternally yours,

F. B. Sogatz, Secretary.

## C O R R E S P O N D E N C E

DEPARTMENT OF PUBLIC HEALTH, STATE OF OKLAHOMA

DR. JOHN W. DUKE, Commissioner

Guthrie, Okla., April 5, 1917.

Dr. C. A. Thompson,  
Muskogee, Okla.

Dear Dr. Thompson:

In reply to your favor of the 2nd inst., we are sending you an exact copy of the new vital statistics law.

I wish to say in regard to this very great achievement upon the part of the Board of Health in being able to get this measure enacted by the Sixth Legislature, that we feel that a new era has dawned upon public health work in Oklahoma. The registration of births and deaths is the foundation of all public health work, and also is of fundamental importance in the establishment of personal and legal rights and for the commercial development of the state.

The first practical test of this law will be whether it can be made effective or not and warrant the admission of the state into the registration area of the United States. No physician with present or expectant influence can afford to fail or neglect to perform his duty with respect to the filing of birth and death certificates in the future.

We have in the United States something like 3,000,000 babies born every year. Each one of these babies is entitled to have its birth registered in the state in which it happens to be born. The doctor or midwife who fails to perform this very important duty for this child has inflicted a great injustice upon the child and by such neglect untold misery, suffering and shame may be visited upon this child in later years.

The most important principles of this law as I see it are the requirements of burial or removal permits, and prompt direct returns of the original birth and death certificates from the local registrar to the state registration office. The central office is thus in direct touch with all local registrars of the state and can check carelessness or neglect promptly.

The future progress and success of this undertaking will depend very largely upon the attitude of the medical profession, and the State Health Department sincerely hopes that it will have the cordial co-operation of every reputable and intelligent physician in this state.

Yours sincerely,

John W. Duke,  
Commissioner of Health.

### THE NEW VITAL STATISTICS LAW.

*Be it Enacted by the Legislature of the State of Oklahoma:*

Section 1. That the State Commissioner of Health shall have charge of the registration of births and deaths; shall prepare the necessary instructions, forms and blanks for obtaining and preserving such records and shall procure the faithful registration of the same in each primary registration district as constituted in Section 3 of this act, and in the central bureau of vital statistics at the capital of the state. The said Commissioner shall be charged with the uniform and thorough enforcement of the law throughout the state, and shall from time to time promulgate any additional rules or regulations that may be necessary for this purpose.

Section 2. That the State Commissioner of Health shall have general supervision over the central bureau of vital statistics, which is hereby authorized to be established by said Commissioner, and which shall be under the immediate direction of the state registrar of vital statistics, when the State Commissioner of Health shall appoint within thirty days after taking effect of this law, and who shall be a competent vital statistician. The state registrar of vital statistics shall hold office for four years or concurrently with the Commissioner and until his successor has been appointed and has qualified, unless such office shall sooner become vacant by death, disqualification, operation of law, or other causes. Any vacancy occurring in such office shall be filled for the unexpired term by the State Commissioner of Health. At least ten days before the expiration of the term of office of the state registrar of vital statistics, his successor shall be appointed by the State Commissioner of Health. The State registrar of vital statistics shall receive an annual salary at the rate of \$1800.00 dollars from the date of his entering upon the discharge of the duties of his office. The State Commissioner of Health shall provide for such clerical and other assistants as may be necessary for the purpose of this Act, who shall serve during the pleasure of the Commissioner and shall fix the compensation of persons thus employed within the amount appropriated therefor by the legislature. Suitable accommodations shall be provided in the offices of the State Commissioner of Health for the Bureau of Vital Statistics which shall be properly equipped with fireproof vault and filing cases for the permanent and safe preservation of all official records made and returned under this act.

Section 3. That for the purpose of this act the state shall be divided into registration districts as follows: Each city, each incorporated town, and each township shall constitute a primary registration district; provided, that the State Commissioner of Health may combine two or more primary registration districts when necessary to facilitate registration.

Section 4. That within ninety days after the taking effect of this Act, or as soon thereafter as possible, the State Commissioner of Health shall appoint a local registrar of vital statistics for each registration district in the state. The term of office of each local registrar so appointed shall be four years, or concurrently with the Commissioner, and until his successor has been appointed and has qualified, unless such office shall sooner become vacant by death, disqualification, operation of law, or other causes; provided, that in cities where health officers or other officials are, in the judgment of the State Commissioner of Health, conducting effective registration of births and deaths under local ordinances at the time of the taking effect of this act, such officials may be appointed as registrars in and for such cities, and shall be subject to the rules and regulations of the state registrar, and to all the provisions of this Act. Any vacancy occurring in the office of local registrar of vital statistics shall be filled for the unexpired term by the State Commissioner of Health, at least ten days before the expiration of the term of office of any such local registrar, his successor shall be appointed by the State Commissioner of Health.

Any local registrar who, in the judgment of the State Commissioner of Health fails or neglects to discharge efficiently the duties of his office as set forth in this Act, or to make prompt and complete returns of births and deaths as required thereby, shall be forthwith removed by the State Commissioner of Health, and such other penalties may be imposed as are provided under Section 22 of this Act.

Each local registrar shall, immediately upon his acceptance of appointment as such, appoint a



deputy, whose duty shall be to act in his stead in case of his absence or disability; and such deputy shall in writing accept such appointment, and be subject to all rules and regulations governing local registrars. And when it appears necessary for the convenience of the people in rural district, the local registrar is hereby authorized, with the approval of the state registrar, to appoint one or more suitable persons to act as subregistrars, who shall be authorized to receive certificates and to issue burial or removal permits in and for such portions of the district as may be designated; and each subregistrar shall note, on each certificate, over his signature, the date of filing, and shall forward all certificates to the local registrar of the district within ten days, and in all cases before the third day of the following month; provided, that each subregistrar shall be subject to the supervision and control of the State registrar, and may be by him removed for neglect or failure to perform his duty in accordance with the provisions of this Act or the rules and regulations of the state registrar, and shall be subject to the same penalties for neglect of duty as the local registrar.

Section 5. That the body of any person whose death occurs in this state, or which shall be found dead therein, shall not be interred, deposited in a vault or tomb, cremated or otherwise disposed of, or removed from or into any registration district, or be temporarily held pending further disposition more than 72 hours after death, unless a permit for burial, removal, or other disposition thereof shall have been properly issued by the local registrar of the registration district in which the death occurred or the body was found. And no such burial or removal permit shall be issued by any registrar until, wherever practicable, a complete and satisfactory certificate of death has been filed with him as hereinafter provided; provided, that when a dead body is transported from outside the state into a registration district in Oklahoma for burial, the transit or removal permit, issued in accordance with the law and health regulations of the place where the death occurred, shall be accepted by the local registrar of the district into which the body has been transported for burial or other disposition, as a basis upon which he may issue a local burial permit; he shall note upon the face of the burial permit the fact that it was a body shipped in for interment, and give the actual place of death; and no local registrar shall receive any fee for the issuance of burial or removal permits under this act other than the compensation provided in Section 20.

Section 6. That a stillborn child shall be registered as a birth and the death shall be filed with the local registrar, in the usual form and manner, the certificate of birth to contain in place of the name of the child, the word "stillbirth"; provided, that a certificate of birth and a certificate of death shall not be required for a child that has not advanced to the fifth month of uterogestation. The medical certificate of the cause of death shall be signed by the attending physician, if any, and shall state the cause of death as "stillborn", with the cause of the stillbirth, if known, whether a premature birth, and, if born prematurely, the period of uterogestation, in months, if known; and a burial or removal permit of the prescribed form shall be required. Midwives shall not sign certificates of death for stillborn children; but such cases, and stillbirths occurring without attendance of either physician or midwife, shall be treated as deaths without medical attendance, as provided for in Section 8 of this act.

(Here is described the form now in use in Oklahoma).

The personal and statistical particulars (Items 1 to 13) shall be authenticated by the signature of the informant, who may be any competent person acquainted with the facts.

The statement of facts relating to the disposition of the body shall be signed by the undertaker or person acting as such.

Section 8. That in case of any death occurring without medical attendance, it shall be the duty of the undertaker to notify the local registrar of such death, and when so notified the registrar shall prior to the issuance of the permit, inform the local health officer and refer the case to him for immediate investigation and certification; provided, that when the local health officer is not a physician, or where there is no such official, and in such cases only the registrar is authorized to make the certificate and return from the statement of relatives or other persons having adequate knowledge of the facts; provided, further, that if the registrar has reason to believe that the death may have been due to unlawful act or neglect, he shall then refer the case to the coroner or other proper officer for his investigation and certification. And the coroner or other proper officer whose duty it is to hold an inquest on the body of any deceased person, and to make the certificate of death required for a burial permit, shall state in his certificate the name of the disease causing death, or if from external causes, (1) the means of death; and (2) whether (probably) accidental, suicidal, or homicidal; and shall, in any case, furnish such information as may be required by the state registrar in order properly to classify the death.

Section 9. That the undertaker, or person acting as undertaker, shall file the certificate of death with the local registrar of the district in which the death occurred and obtain a burial or removal permit prior to any disposition of the body. He shall obtain the required personal and statistical particulars from the person best qualified to supply them, over the signature and address of his information. He shall then present the certificate to the attending physician, if any, or to the health officer or coroner, as directed by the local registrar, for the medical certificate of the cause of death and other particulars necessary to complete the record, as specified in Sections 7 and 8. And he shall then state the facts required relative to the date and place of burial or removal, over his signature and with his address, and present the completed certificate to the local registrar in order to obtain a permit for burial, removal or other disposition of the body. The undertaker shall deliver the burial permit to the person in charge of the place of burial, before interring or otherwise disposing of the body; or shall attach the removal permit to the box containing the corpse, when shipped by any transportation company; said permit to accompany the corpse to its destination, where, if within the state of Oklahoma it shall be delivered to the person in charge of the place of burial.

Every person, firm or corporation selling a casket, shall keep a record showing the name of the



purchaser, purchaser's postoffice address, name of deceased, date of death, and place of death of deceased, which record shall be open to inspection of the state registrar at all times. On the first day of each month the person, firm or corporation, selling caskets shall report to the state registrar each sale for the preceding month, on a blank provided for that purpose; provided, however, that no person, firm or corporation selling caskets to dealers or undertakers only shall be required to keep such record, nor shall such report be required from undertakers when they have direct charge of the disposition of a dead body.

Every person, firm, or corporation selling a casket at retail, and not having charge of the disposition of the body, shall inclose within the casket a notice furnished by the state registrar calling attention to the requirements of the law, a blank certificate of death, and the rules and regulations of the State Commissioner of Health concerning the burial or other disposition of a dead body.

Section 10. That if the interment, or other disposition of the body is to be made within the state the wording of the burial or removal permit may be limited to a statement by the registrar, and over his signature, that a satisfactory certificate of death having been filed with him, as required by law, permission is granted to inter, remove, or dispose otherwise of the body, stating the name, age, sex, cause of death and other necessary details upon the form prescribed by the state registrar.

Section 11. That no person in charge of any premises on which interments are made shall inter or permit the interment or other disposition of any body unless it is accompanied by a burial, removal or transit permit, as herein provided. And such person shall indorse upon the permit the date of interment, over his signature, and shall return all permits so indorsed to the local registrar of his district within ten days from the date of interment, or within the time fixed by the local board of health. He shall keep a record of all bodies interred or otherwise disposed of on the premises under his charge, in each case stating the name of each deceased person, place of death, date of burial or disposal, and name and address of the undertaker; which record shall at all times be open to official inspection; provided, that the undertaker or person acting as such, when burying a body in a cemetery or burial ground having no person in charge, shall sign the burial or removal permit, giving the date of burial, and shall write across the face of the permit the words No person in charge, and file the burial or removal permit within ten days with the registrar of the district in which the cemetery is located.

Section 12. That the birth of each and every child born in this state shall be registered as hereinafter provided.

Section 13. That within ten days after the date of each birth, there shall be filed with the local registrar of the district in which the birth occurred a certificate of such birth, which certificate shall be upon the form adopted by the State Commissioner of Health with a view to procuring a full and accurate report respect with to each item of information enumerated in Section 14 of this Act.

In each case where a physician, midwife, or person acting as midwife, was in attendance upon the birth, it shall be the duty of such physician, midwife, or person acting as midwife, to file in accordance herewith the certificate herein contemplated.

In each case where there was no physician, midwife, or person acting as midwife, in attendance upon the birth, it shall be the duty of the father or mother of the child, the householder or owner of the premises where the birth occurred, or the manager, or superintendent of the public or private institution where the birth occurred, each in the order named, within ten days after the date of such birth, to report to the local registrar the fact of such birth. In such case and in case the physician, midwife, or person acting as midwife, in attendance upon the birth is unable, by diligent inquiry, to obtain any item or information contemplated in Section 14 of this Act, it shall then be the duty of the local registrar to secure from the person so reporting, or from any other person having the required knowledge, such information as will enable him to prepare the certificate of birth herein contemplated, and it shall be the duty of the person reporting the birth or who may be interrogated in relation thereto to answer correctly and to the best of his knowledge all questions put to him by the local registrar which may be calculated to elicit any information needed to make a complete record of the birth as contemplated by said Section 14, and it shall be the duty of the informant as to any statement made in accordance herewith to verify such statement by his signature, when requested so to do by the local registrar.

Section 14. That the certificate of birth shall contain the following items, which are hereby declared necessary for the legal, social, and sanitary purposes subserved by registration records:

(Here follows description of blank now in use in Oklahoma)

Section 15. That when any certificate of birth of a living child is presented without the statement of the given name, then the local registrar shall make out the blank and deliver to the parents of the child a special blank for the supplemental report of the given name of the child, which shall be filled out as directed, and returned to the local registrar as soon as the child shall have been named.

Section 16. That every physician, midwife, and undertaker shall, without delay, register his or her name, address and occupation with the local registrar of the district in which he or she resides, or may hereafter establish a residence; and shall thereupon be supplied by the local registrar with a copy of this Act, together with such rules and regulations as may be prepared by the state registrar relative to its enforcement. Within thirty days after the close of each calendar year each local registrar shall make a return to the state registrar of all physicians, midwives, or undertakers, who have been registered in his district during the whole or any part of the preceding calendar year; provided, that no fee or other compensation shall be charged by local registrars to physicians, midwives, or undertakers for registering their names under this section or making returns thereof to the state registrar.

Section 17. That all superintendents or managers, or other persons in charge of hospitals, almshouses, lying-in or other institutions, public or private, to which persons resort for treatment of diseases,

confinement, or are committed by process of law, shall make a record of all the personal and statistical particulars relative to the inmates in their institutions at the date of approval of this Act, which are required by process in the forms of the certificates provided for by this Act, as directed by the State registrar; and thereafter such record shall be, by them, made for all future inmates at the time of their admittance. And in case of persons admitted or committed for treatment of diseases, the physician in charge shall specify for entry in the record, the nature of the disease, and where, in his opinion, it was contracted. The personal particulars and information required by this section shall be obtained from the individual himself if it is practicable to do so; and when they cannot be so obtained, they shall be obtained in as complete a manner as possible from relatives, friends, or other persons acquainted with the facts.

Section 18. That the state registrar shall prepare, print, supply to all registrars all blanks and forms used in registering, recording and preserving the returns, or in otherwise carrying out the purposes of this Act; and shall prepare and issue such detailed instructions as may be required to procure the uniform observance of its provisions and the maintenance of a perfect system of registration; and no other blanks shall be used than those supplied by the state registrar. He shall carefully examine the certificates received monthly from the local registrars, and if any such are incomplete or unsatisfactory he shall require such further information to be supplied as may be necessary to make the record complete and satisfactory. And all physicians, midwives, informants, or undertakers, and all other persons having knowledge of the facts, are hereby required to supply, upon a form provided by the state registrar or upon the original certificate, such information as they may possess regarding any birth or death upon demand of the state registrar, in person, by mail, or through the local registrar; provided, that no certificate of birth or death, after its acceptance for registration by the local registrar, and no other record made in pursuance of this Act, shall be altered or changed in any respect otherwise than by amendments properly dated, signed, and witnessed. The state registrar shall further arrange, file and permanently preserve the certificates in a systematic manner, and shall prepare and maintain a comprehensive and continuous card index of all births and deaths registered; said index to be arranged alphabetically, in the case of deaths, by the names of decedents, and in the case of births, by the names of fathers and mothers. He shall inform all registrars what diseases are to be considered infectious, contagious, or communicable and dangerous to the public health, as decided by the State Commissioner of Health, in order that when deaths occur from such diseases proper precautions may be taken to prevent their spread.

If any cemetery company or association, or any church or historical society or association, or any other company, society or association, or any individual, is in possession of any record of births or deaths which may be of value in establishing the genealogy of any resident of this state, such company, society, association or individual, may file such record or a duly authenticated transcript thereof with the state registrar, and it shall be the duty of the state registrar to preserve such record or transcript and to make a record and index thereof in such form as to facilitate the finding of any information contained therein. Such record and index shall be open to inspection by the public, subject to such reasonable conditions as the state registrar may prescribe. If any person desires a transcript of any record filed in accordance herewith, the state registrar shall furnish the same upon application, together with a certificate that it is a true copy of such record, as filed in his office, and for his services in so furnishing such transcript and certificate he shall be entitled to a fee of fifty cents per hour or fraction of an hour necessarily consumed in making such transcript, and to a fee of twenty-five cents for the certificate, which fee shall be paid by the applicant.

Section 19. That each local registrar shall supply blank forms of certificates to such persons as require them. Each local registrar shall carefully examine each to ascertain whether or not it has been made out in accordance with the provisions of this Act and the instructions of the state registrar; and if any certificate of death is incomplete or unsatisfactory, it shall be his duty to call attention to the defects in the return, and to withhold the burial or removal permit until such defects are corrected. All certificates, either of birth or of death, shall be written legibly, in durable black ink, and no certificate shall be held to be complete and correct that does not supply all of the items of information called for therein, or satisfactorily account for their omission. If the certificate of death is properly executed and complete, he shall then issue a burial or removal permit to the undertaker; provided, that in case the death occurred from some disease which is held by the State Commissioner of Health to be infectious, contagious, or communicable and dangerous to the public health, no permit for the removal or other disposition of the body shall be issued by the registrar, except under such conditions as may be prescribed by the State Commissioner of Health. If a certificate of birth is incomplete, the local registrar shall immediately notify the informant and require him to supply the missing items of information if they can be obtained. He shall number consecutively the certificates of birth and death, in two separate series, beginning with the number 1 for the first birth and the first death in each calendar year, and sign his name as registrar in attest of the date of filing in his office. He shall also make a complete and accurate copy of each birth and each death certificate registered by him in a record book supplied by the state registrar, to be preserved permanently in his office as the local record, in such manner as directed by the state registrar. And he shall, on the tenth day of each month, transmit to the state registrar all original certificates registered by him for the preceding month. And if no births or no deaths occurred in any month, he shall, on the tenth day of the following month, report that fact to the state registrar, on a card provided for such purpose.

Section 22. That each local registrar shall be paid the sum of twenty-five cents for each birth certificate and each death certificate properly and completely made out and registered with him, and correctly recorded and promptly returned by him to the state registrar, as required by this Act. And in case no births or no deaths were registered during any month, the local registrar shall be entitled to



be paid the sum of twenty-five cents for each report to that effect, but only if such report be made promptly as required by this Act. All amounts payable to a local registrar under the provisions of this section shall be paid by the treasurer of the county in which the registration district is located, upon certification by the state registrar. And the state registrar shall annually certify to the treasurers of the several counties the number of births and deaths properly registered, with the names of the local registrars and the amounts due each at the rates fixed herein.

Section 21. That the state registrar shall, upon request, supply to any applicant a certified copy of the record of any birth or death registered under provisions of this Act, for the making and certification of which he shall be entitled to a fee of fifty-cents, to be paid by the applicant. Any such copy of the record of a birth or death, when properly certified by the state registrar, shall be prima facie evidence in all courts and places of the facts therein stated. For any search of the files and records when no certified copy is made, the state registrar shall be entitled to a fee of fifty cents for each hour or fractional part of an hour of time of search, said fee to be paid by the applicant. And the state registrar shall keep a true and correct account of all fees by him received under these provisions, and turn the same over to the state treasurer; provided, that the state registrar shall, upon request of any parent or guardian, supply, without fee, a certificate limited to a statement as to the date of birth of any child when the same shall be necessary for admission to school, or for the purpose of securing employment. And provided further, that the United States Census Bureau may obtain, without expense to the state, transcripts or certified copies of birth and deaths without payment of the fees herein prescribed.

Section 22. That any person, who for himself or as an officer, agent, or employee of any other person, or of any corporation or partnership, (a) shall inter, cremate, or otherwise finally dispose of the dead body of a human being, or permit the same to be done, or shall remove said body from the primary registration district in which the death occurred or the body was found, without the authority of a burial or removal permit issued by the local registrar of the district in which the death occurred or in which the body was found; or (b) shall refuse or fail to furnish correctly any information in his possession, or shall furnish false information affecting any certificate or record, required by this Act; or (c) shall wilfully alter, otherwise than is provided by Section 18 of this Act, or shall falsify any certificate of birth or death, or any record established by this Act; or (d) being required by this Act to fill out a certificate of birth or death and file the same with the local registrar, or deliver it, upon request, to any person charged with the duty of filing the same, shall fail, neglect, or refuse to perform such duty in the manner required by this Act, or (e) being a local registrar, deputy registrar, or subregistrar, shall fail, neglect, or refuse to perform his duty as required by this Act and by the instructions and directions of the state registrar thereunder, shall be deemed guilty of a misdemeanor and upon conviction thereof shall for the first offense be fined not less than five dollars (\$5.00) and, not more than fifty dollars (\$50.00), and for each subsequent offense not less than ten dollars (\$10.00) nor more than one hundred dollars (\$100.00), or be imprisoned in the county jail not more than sixty days, or be both fined and imprisoned in the discretion of the court.

Section 25. That each local registrar is hereby charged with the strict and thorough enforcement of the provisions of this Act in his registration district, under the supervision and direction of the state registrar. And he shall make an immediate report to the state registrar of any violation of this law coming to his knowledge, by observation or upon complaint of any person, or otherwise.

The State registrar is hereby charged with the thorough and efficient execution of the provisions of this Act in every part of the state, and is hereby granted supervisory power over local registrars, deputy local registrars, and subregistrars, to the end that all of its requirements shall be uniformly complied with. The state registrar, either personally or by an accredited representative, shall have authority to investigate cases of irregularity or violation of law, and all registrars shall aid him, upon request, in such investigations. When he shall deem it necessary, he shall report cases of violation of any of the provisions of this Act to the prosecuting attorney of the county, with a statement of the facts and circumstances; and when any such case is reported to him by the state registrar, the prosecuting attorney shall forthwith initiate and promptly follow up the necessary court proceedings against the person or corporation responsible for the alleged violation of law. And upon request of the state registrar, the attorney general shall assist in the enforcement of the provisions of this Act.

## MISCELLANEOUS

### THE ARMY MEDICAL CORPS AS A CAREER.

R. E. Noble, Washington, D. C. (*Journal A. M. A.*, March 31, 1917), says that the service in the army medical corps has advantages for young men of the profession that are not as generally understood as they should be. In the first place, one must bear in mind that a medical officer is not only a physician but he is also a soldier and an integral part of a highly organized body, in which he holds a responsible position. He is trained for certain specific duties, besides taking care of the sick. He is an administrator, a sanitarian, as well as a doctor, and has to regard not only the interests of the government but his duty to the individual. Primarily, he is a sanitarian and must safeguard the health of the troops, familiarize himself with the health conditions of the region he may be in, and take the necessary measures to prevent introduction of disease. He points out the successes, as shown in the history of the medical service in the last eighteen years, and the remarkable low morbidity and mortality rates in the United States army. The sick rate of the troops on the border was 1.9 per thousand, per annum, in the last seven



months, as against the death rate for sickness in 1898 which was 28.8 per annum. The army medical officer is a specialist, even when a student candidate for admission in the Army Medical School, and later, after qualifying he is encouraged to specialize still further in one or another departments of medical practice. The applicant for a commission must be a graduate of a reputable medical school, must have served a postgraduate year in a hospital, and must be of good moral character, physically sound and between 22 and 32 years of age. He must send in his application in his own handwriting, accompanied by testimonials that he has fulfilled the requirements stated above. He must pass an examination for which opportunity is given twice a year in different parts of the country. This is both physical and professional and is sent by the examining board to the surgeon-general of the army, who forwards them with the testimonials to the central examining board where they are graded. The successful candidates are commissioned as first lieutenants in the reserve corps. The discipline in the army medical school is strict, requirements high and the work hard. The midterm examinations practically settle the future of the student and he is ordered home, if he fails. Even in that case, he has had a course of instruction which cannot be duplicated in civil life. If he succeeds, and receives his commission, he is assigned to post or field duty and later takes his tour of foreign service either in Alaska or the Philippines for two years or in the Canal Zone, Hawaiian Islands or Porto Rico for three years. The routine duties here are the same as those at home, but each officer is expected as far as he can, to take up the study of the peculiar diseases of the country. Opportunity for travel to nearby countries is allowed, and everything that can be done by the medical department to aid the worker is given. Leave for study is granted when possible, and prior to promotion captains are assigned for one year to medical centers for the purpose of study and research. Reciprocal arrangements have been made with certain schools and foundations for special privileges to medical officers, on condition that they give instruction in their own special and general lines of practice. A research division exists which is one of the greatest advances in medical department administration in many years, and twenty-four officers have already been assigned to duty there. In passing through the various grades from lieutenant to colonel, examinations are required, and should a lieutenant or captain fail, he is honorably discharged with one year's pay. The rates of pay are stated, but there are, in addition, allowances for quarters, fuel and light. The pay ranges from \$2,000 a year to a first lieutenant, to \$5,000 a year for a full colonel, and retirement is provided for, in case of disability or age, at three-quarters pay. Never have the advantages been more than at the present time, and while the income may be smaller than that of specialists in civil life, the position is one of dignity, opportunity and service to one's country.

#### A LABORATORY BOOKLET.

This booklet concerns the relation of the consulting laboratory to the practicing physician, and has just been issued by the Gradywohl Biological Laboratories of St. Louis.

Its great value to the physician is, in having the information at hand in early diagnosis and control of treatment. It is especially helpful in the interpretation and technique of blood chemical tests. Readers will be especially interested in obtaining this booklet, which will be sent free upon request.

#### COUNCIL ON PHARMACY AND CHEMISTRY.

Dr. Claude A. Thompson, Secretary  
Journal Oklahoma State Medical Association.  
Muskogee, Okla.

Dear Doctor:

During March the following articles have been accepted by the Council on Pharmacy and Chemistry for inclusion with New and Non-official Remedies:

**Non-proprietary articles:** Ferric Cacodylate.

**H. K. Mulford Company:** Iron Cacodylate Ampoules, 0.03 gm., Mulford.

**E. R. Squibb and Sons:** Ampoules Iron Cacodylate, 0.03 gm., Squibb.

Yours truly,

W. A. Puckner, Secretary,  
Council on Pharmacy and Chemistry.

#### NEW AND NON-OFFICIAL REMEDIES.

**Tablets Sodium Chloride and Citrate—Squibb** (Dr. Martin H. Fischer). Each tablet contains sodium chloride 1 gm. and sodium citrate 2 gm. E. R. Squibb and Sons, New York.

**Optochin.—Ethyl-hydrocupreine.** A synthetic alkaloid closely related to quinine. It has the antimalarial and anesthetic action of quinine, but toxic symptoms, such as tinnitus, deafness, amblyopia or amaurosis (retinitis) are more liable to occur than with quinine. Investigations indicate that the drug may be of value in the treatment of lobar pneumonia, when its safe dosage has been determined. Reports indicate that the drug is of decided value in the treatment of pneumococcal infection of the eye (*ulcus cornu serpens*). Optochin is insoluble in water, but may be used in 1 to 2 per cent solution in a bland fatty oil or as an ointment. Merck and Co., New York.

**Optochin Hydrochloride.—Ethyl-hydrocupreine hydrochloride.** The hydrochloride of optochin (see above). It has the therapeutic properties of optochin, but is soluble in water. For application to the eye and instillation into the conjunctival sac a freshly prepared 1 to 2 per cent solution in water is used. Merck and Co., New York. (*Journal A. M. A.*, March 3, 1917, p. 713).

## PROGRAM

### TWENTY-FIFTH ANNUAL MEETING, OKLAHOMA STATE MEDICAL ASSOCIATION, LAWTON-MEDICINE PARK, MAY 8-9-10, 1917.

(Subject to addition and modification.)

#### GENERAL INFORMATION.

**Please Remember to Register.** If you are not a member for 1917 you cannot register. Registration will be made from the county rosters as reported by the county secretaries and no one will be given a badge or admission to the sections without registration.

**Please do not Pay Your Dues** at Medicine Park, pay them before you go there.

**Please Remember** that matters of business and policy should be presented to either the Council or House of Delegates, as the case may be. The Council considers all purely business matters while the House of Delegates considers those of policy, etc. The sections handle scientific matters only and their time should not be wasted by the introduction of extraneous or unnecessary matter.

Those coming through Lawton, should go direct to the Information Bureau in the lobby of the Midland Hotel. Transportation by auto from this bureau will be arranged for the Park.

The Telephone No. is 784. If you expect telephone calls from home while at the meeting have them call you at this number.

The Information Bureau at Medicine Park will be in the lobby of the Outside Inn. Long distance telephone service is provided there.

Tickets from Lawton to Medicine Park and return will be on sale at the Information Bureau.

#### AUTOMOBILES.

The best automobile roads leading to Lawton-Medicine Park will be properly marked for a reasonable distance. WATCH for the signs.

Those coming from and by way of Oklahoma City and El Reno should come by way of Chickasha, Anadarko and Apache. Fourteen miles out of Apache, at Carter's Store, look for the sign directing you to either Lawton or Medicine Park. Those wanting to go to Medicine Park direct, turn west and follow the signs 6 miles into the Park. Those wishing to come to Lawton first, continue on due south through the Military Reservation, pass Ft. Sill and to Lawton ten miles.

For any information or automobile trouble, telephone Information Bureau Midland Hotel Lawton. Phone 784.

#### TRAIN SCHEDULE TO LAWTON.

<b>Frisco.</b>	Leave Oklahoma City at 8:15 a. m. ....	Arrive Lawton 12:15 p. m.
	Leave Oklahoma City at 6:00 p. m. ....	Arrive Lawton 9:50 p. m.
<b>Rock Island.</b>	Leave Chickasha 9:30 a. m. ....	Arrive Lawton 12:45 p. m.
	Leave Chickasha 3:10 p. m. ....	Arrive Lawton 6:10 p. m.

#### TRAIN SCHEDULE FROM LAWTON.

<b>Frisco.</b>	Leave Lawton 7:55 a. m. ....	Arrive Oklahoma City at noon.
	Leave Lawton 2:25 p. m. ....	Arrive Oklahoma City 6:30 p. m.
<b>Rock Island.</b>	Leave Lawton 8:50 a. m. ....	Arrive Chickasha 11:30 a. m.
	Leave Lawton 2:35 p. m. ....	Arrive Chickasha 5:30 p. m.
	Leave Lawton 6:10 p. m. ....	Arrive Waurika 8:15 p. m.
	Leave Waurika 1:05 a. m. for all points north.	

Automobiles will meet all trains.

Fare to Medicine Park will be \$1.00 per person, provided there are as many as four passengers.

Registration Bureau will be in Outside Inn.

Physicians are requested to please notify Secretary of Comanche County Society at Lawton if they will attend and give following information: How many in Party? Do you wish Hotel or Cottage accommodations? How many ladies in the party? What day will you come? How long will you stay?

Please attend to notifying as above, for if you do not you may not get a good reservation. If you do not, you will be to blame. Doctors attending with their wives will be assigned to either hotel or cottage accommodations. If you have friends with whom you wish to be quartered during the convention, so state in your letter. Please do not make double reservations, if you get up a party and desire to be together please arrange so that other reservations will not be made for the same people.

Owing to the congested condition of the Hotels in Lawton due to the assembling of the soldiers at Ft. Sill and the oil activity near the city, a very limited number can be accommodated in the city. If you desire to drive in to the city each night and out each morning, please make reservations accordingly. The road to Medicine Park from Lawton is good and can be easily driven in 45 minutes.

The bass season opens May 1st, so if you wish to fish bring your outfit.  
Please notify us if you are coming, it only takes a moment. Do it now.

Dr. General Pinnell,  
Secretary Comanche County Medical Society.

Dr. Jackson Broshear,  
Dr. W. B. Mead,  
Dr. D. A. Myers,  
Entertainment Committee.

## TUESDAY, MAY 8, 2:30 P. M.

Meeting of the House of Delegates for the Transaction of General Business.

4:00 p. m.

Demonstration of First Aid Work by Employees of the Rock Island Shops, Shawnee, under the Direction of the First Aid Committee, Drs. F. H. Clark, James C. Johnston, and G. S. Baxter.

Open discussion of Medico-Legal Matters.

Evening—8:00 o'clock.

General meeting in Assembly Room of Editor's Home.

Call to Order.

Invocation—Rev. T. J. Irwin, Lawton, Oklahoma.

Address of Welcome—Senator J. Elmer Thomas, Lawton, Oklahoma.

Response—Dr. LeRoy Long, Oklahoma City, Oklahoma.

"A Home for the Doctor."—Dr. E. S. Gooch, Lawton, Oklahoma.

Address of President—Dr. C. R. Hume, Anadarko, Oklahoma.

8:00 p. m. Dance at the Medicine Park Pavilion.

8:00 p. m. Smoker at the Medicine Park Pavilion.

Wednesday, May 9—2:00 p. m. The Ladies Auxiliary of the Comanche County Society will entertain the visiting ladies with an automobile ride starting from Outside Inn through Ft. Sill to Lawton, where they will be entertained.

All sections, unless otherwise announced, will start promptly at 8:30 a. m. Wednesday and continue until completed.

## SECTION ON SURGERY

Dr. McLain Rogers, Chairman, Clinton.

### WEDNESDAY, MAY 9—8:30 A. M.

1. Chairman's Address..... Dr. McLain Rogers, Clinton
2. "Do's and Don'ts of Pelvic Surgery"..... Dr. Ross Grosshart, Tulsa  
Discussion opened by Dr. Roscoe Walker, Sapulpa.
3. "Application of the Principle of Bone Graft to Unretainable Recent Fractures".....  
..... Dr. M. E. Stout, Oklahoma City  
Discussion opened by Dr. A. H. Bungardt, Cordell.
4. "The Treatment of Club Feet"..... Dr. Robt. L. Hull, Oklahoma City  
Discussion opened by Dr. M. E. Stout, Oklahoma City and Dr. Ralph Smith, Tulsa.
5. "Injuries of the Head"  
Important anatomical conditions; the important circulatory physiology;  
the physio-pathological condition following brain injury; consideration of the  
mortality and results of brain injury; the importance of the exact knowledge of  
the condition during the early hours following the brain injury and the necessity  
of operative treatment early when indicated. Dr. J. W. Riley, Oklahoma City  
Discussion opened by Dr. John Hatchett, El Reno.
6. "Fractures of the Base of Skull"  
Special reference to compression signs and appearance of disk.  
Dr. Curt von Wedel, Oklahoma City  
Discussion opened by Dr. E. F. Davis, Oklahoma City.
7. "Women as Insurance Risks"  
New social relations demanding that they carry more insurance. Types of  
operative treatment as hazards and differentiation of same.  
Dr. J. S. Hartford, Oklahoma City  
Discussion opened by Dr. M. Smith, Oklahoma City.
8. "Lost Arts in the Practice of Medicine and Surgery"..... Dr. Ralph Smith, Tulsa.  
Discussion opened by Dr. W. E. Dicken, Oklahoma City.



9. "Bladder Stone with Case Report"  
Foreign body as nucleus; primary cystitis a rare primary condition; cystitis indicative of kidney disease; use of cystoscope and X-ray in diagnosis  
Dr. L. S. Willour, McAlester.  
Discussion opened by Dr. J. H. White, Muskogee.
10. "The Value of the Simple Cystoscope in Diagnosis"  
The instrument is so simple and the technic of its employment such that it is a practical part of office equipment. Cystoscopy in the hands of the average physician is a failure because (1) he fails to study the indications which call for its employment; (2) he attempts the employment of the cystoscope in a manner not indicated (catheterizing) and (3) he selects an instrument usually of the universal type, which is not practical except in the hands of the inventor or expert.  
Dr. Horace Reed, Oklahoma City  
Discussion opened by Dr. Davy Garrett, Altus.
11. "Treatment of Cancer of the Lip"-----Dr. S. N. Mayberry, Enid  
Discussion opened by Dr. Everett Lain, Oklahoma City.
12. "Acute Intestinal Obstruction"  
Causation of symptoms; importance of diagnosis; the value of enterostomy; and a description of technique used by the author. Dr. F. L. Carson, Shawnee  
Discussion opened by Dr. S. C. Davis, Clinton.
13. "Diverticulitis, with some Illustrative Cases and Operative Findings Reported"-----  
-----Drs. Risser and Gearhart, Blackwell  
Discussion opened by Dr. LeRoy Long, Oklahoma City.
14. "Surgical Pathology of Upper Abdominal Quadrant"  
Necessity for greater precision in diagnosis. Within a space described by circle less than six inches in diameter we find gall bladder, pylorus, hepatic flexure of colon, appendix, right kidney and head of pancreas and duodenum. Differentiation between affections of each organ. Many of the symptoms are very similar. The pathology of each determined by exclusion. Dr. F. H. Clark, El Reno  
Discussion opened by Dr. D. A. Myers, Lawton.
15. "Diagnosis and Treatment of Ectopic Pregnancy"  
Differential diagnosis; advisability of immediate and delayed operation.  
Dr. J. Hutchings White, Muskogee  
Discussion opened by Dr. Ross Grosshart, Tulsa.
16. "The Surgery of Cystocele, Rectocele, and Procidentia Uteri"  
Advice which is proper for the non-parous woman might not be proper or even pernicious for the parous woman. In the latter the child bearing function must always be borne in mind.  
Procidentia uteri complete is not always a bar to child bearing. These cases furnish a surgical problem all their own, which is sometimes difficult of solution.  
There is also a developmental or congenital type of retroversion and decensus due to anterior cervical displacement, and insufficient development of posterior wall of uterus.  
Also a low uterus which is but part of a general visceroptosis. Ligamentous stretching often gives the most pronounced outery. The beginning therefore often causes more pain than the later stages. In the later stages the symptoms are due to stasis of bladder and rectum.  
No round ligament operation alone is sufficient when there is forward displacement of the cervix.  
It is not always easy to definitely settle just how much of a symptom syndrome is due to the procidentia. In some cases the diagnostic insertion of a Hodge pessary will help. Each case is to be a law unto itself.  
There are objections to the Baldy-Webster hammock operation, which has to do with the ovaries.  
In the non-parous the uterus should never be sacrificed without reason.  
Dr. A. L. Blesh, Oklahoma City  
Discussion opened by Dr. F. Y. Cronk, Guthrie, and Dr. D. A. Myers, Lawton.
17. "Hysterectomy for Carcinoma by the Electric Cautey Knife"  
Equally good results as by the heavy irons of Percy with far less danger. A much easier technic and less liable to post-operative complications than by Percy method.  
Dr. V. Berry, Okmulgee  
Discussion opened by Dr. C. W. Tedrowe, Woodward.
18. "Metastases"  
Definite knowledge of the phenomenon and principle; portions of body furnishing foci of distribution; types of pathology amenable to treatment; varying periods of incubation incident to the respective types of infection; parasitic, bacterial, and unclassified forms, which are definitely known to propagate the species in successive areas of the body.  
Dr. S. H. Landrum, Altus  
Discussion opened by Dr. Curt von Wedel, Oklahoma City.

19. "Tetanus, The Intraneural and Intraspinal Injection of Antitetanic Serum as a Therapeutic Procedure"..... Dr. LeRoy Long, Oklahoma City  
Discussion opened by Dr. Horace Reed, Oklahoma City.
20. "Double Undescended Testicles, Report of Case Operated, and Results Ten Months After"..... Dr. Fenton M. Sanger, Oklahoma City  
Discussion opened by Dr. W. C. Cummings, Okmulgee.
21. "The Conservation of the Female Pelvic Organs"..... Dr. Alva A. West, Guthrie  
Discussion opened by Dr. T. M. Aderhold, El Reno.
22. "Report of Two Gall-Bladder Cases"..... Dr. E. Forrest Hayden, Tulsa  
Discussion opened by Dr. V. C. Tisdal, Elk City.
23. Subject unannounced..... Dr. G. C. Croston, Sapulpa

## SECTION ON OBSTETRICS AND PEDIATRICS

DR. L. W. COTTON, Chairman, Enid

1. Chairman's Address..... Dr. L. W. Cotton, Enid
2. "Infant Feeding"..... Dr. J. Raymond Burdick, Tulsa  
Discussion opened by Dr. ....
3. "Acidosis of Pregnancy"..... Dr. Winnie M. Sanger, Oklahoma City  
Discussion opened by Dr. ....
4. "Purpura Hemorrhagica"—With Report of Case..... Dr. W. M. Taylor, Oklahoma City  
Discussion opened by Dr. ....
5. "The Puerperal State"—With some personal experiences and conclusions..... Dr. T. F. Renfrow, Billings  
Discussion opened by Dr. ....
6. "Some Common Causes of Difficult Labor and Their Treatment"..... Dr. W. W. Wells, Oklahoma City  
Discussion opened by Dr. V. C. Tisdal, Elk City
7. "Observations on Racial Vitality"..... Dr. M. A. Warhurst, Seminole  
Discussion opened by Dr. ....
8. "Marasmus"..... Dr. John S. Pine, Oklahoma City  
Discussion opened by Dr. Carl Puckett, Pryor
9. "Some Frequent Obstetric Procedures, Conservative and Vicious"..... Dr. W. A. Fowler, Oklahoma City

## SECTION ON GENERAL MEDICINE AND MENTAL AND NERVOUS DISEASES

DR. A. K. WEST, Chairman, Oklahoma City

1. Chairman's Address—"The Good of the Order"..... Dr. A. K. West, Oklahoma City
2. "The Prevention of Malaria"..... Dr. John W. Duke, Commissioner of Health, Guthrie  
Discussion opened by Dr. C. W. Heitzman, Muskogee.
3. "Etiological Role of Focal Infections in the Cause of Disease"..... Dr. J. A. Hatchett, El Reno  
Discussion opened by Dr. Lea A. Riely, Oklahoma City
4. "Focal Infections and Rheumatism"..... Dr. Ellis Lamb, Clinton  
Discussion opened by Dr. W. R. Leverton, Cloudchief
5. "The Use and Abuse of Serums and Vaccines"..... Dr. C. W. Fisk, Kingfisher  
Discussion opened by Dr. C. S. Bobo, Norman
6. "Serums and Vaccines, Diagnostic and Therapeutic Value"..... Dr. George A. LaMotte, Oklahoma City  
Discussion opened by Dr. W. E. Wright, Tulsa
7. "Remarks on Brain Injuries"  
Injury to brain, with and without fracture, shock, ophthalmic examination,  
pulse, time of operation..... Dr. A. D. Young, Oklahoma City  
Discussion opened by Dr. D. A. Myers, Lawton.
8. "Intravenous Medication"..... Dr. W. Forest Dutton, Tulsa  
Discussion opened by Dr. N. W. Mayginnis, Tulsa.
9. "Sick Headache"..... Dr. Chas. W. Heitzman, Muskogee  
Discussion opened by Dr. Geo. Kilpatrick, McAlester.

## SECTION ON EYE, EAR, NOSE AND THROAT

DR. A. W. ROTH, Chairman, Tulsa

## EYE

1. Chairman's Address. Report of Case.....Dr. A. W. Roth, Tulsa
2. "The Diagnostic Value of Nystagmus".....Dr. A. L. Guthrie, Oklahoma City  
Discussion opened by Dr. C. M. Fullenwider, Muskogee
3. "Iridocyclitis Due to Focal Infection from a Tooth".....Dr. L. M. Westfall, Oklahoma City  
Discussion opened by Dr. H. E. Yazel, Bartlesville
4. "Ocular Manifestation of Syphilis".....Dr. J. H. Barnes, Enid
5. "Toxic Amblyopia".....Dr. G. E. Hartshorne, Shawnee  
Discussion opened by Dr. W. T. Salmon Oklahoma City

## EAR

6. "Acute Otitis Media".....Dr. W. A. Cook, Tulsa  
Discussion opened by Dr. L. A. Newton, Oklahoma City

## NOSE

7. "Report of Case of Complete Bone Obstruction of Both Nares".....Dr. W. H. Rutland, Altus  
Discussion opened by Dr. D. D. McHenry, Oklahoma City
8. "Is the Middle Turbinate Bone Essential?".....Dr. L. C. Kuyrkeudall, McAlester  
Discussion opened by Dr. E. F. Davis, Oklahoma City

## THROAT

9. "Foreign Bodies in the Air Passages and Their Removal with the Bronchoscope".....  
.....Dr. E. S. Ferguson, Oklahoma City  
Discussion opened by Dr. M. K. Thompson, Muskogee
10. "Modification of Sluder Technique in Tonsillectomy".....Dr. E. F. Stroud, Tulsa  
Discussion opened by Dr. H. C. Todd, Oklahoma City

## SECTION ON GENITO-URINARY, SKIN AND RADIOLOGY

DR. CURTIS R. DAY, Chairman, Oklahoma City

1. Chairman's Address—"Excuse for the Creation of the Section of Genito-Urinary,  
Skin and Radiology".....Dr. Curtis R. Day, Oklahoma City
2. "A Relation of Focal Infection to Skin Diseases".....Dr. E. S. Lain, Oklahoma City  
Discussion opened by Dr. McLain Rogers, Clinton.
3. (a) "X-ray in Diagnosis of Gastro-Intestinal Disease".....Dr. J. T. Martin, Oklahoma City  
(b) "X-ray as a Diagnostic and Therapeutic Aid".....Dr. A. L. Stocks, Muskogee  
Discussion opened by Dr. M. M. Roland, Oklahoma City.
4. Symposium on Syphilis:  
(a) "Pathology of Syphilis".....Dr. J. O. Walker, Oklahoma City  
(b) "Early Treatment of Syphilis".....Dr. R. T. Edwards, Oklahoma City  
(c) "Manifestations of Latent Syphilis".....Dr. M. F. Engman, St. Louis, Mo.  
(d) "Treatment of Latent Syphilis".....Dr. P. P. Nesbitt, Muskogee  
(e) "Ocular Manifestations of Syphilis".....Dr. J. H. Barnes, Enid  
(f) "Hereditary Syphilis".....Dr. W. L. Kendall, Enid  
(g) "Syphilis of the Nervous System".....Dr. W. D. Griffin, Norman  
Discussion opened by Dr. F. B. Sorgatz, Oklahoma City, and Dr. J. W. Riley, Oklahoma City
5. "Physiology, Symptomatology and Treatment of Epididymitis".....  
.....Dr. W. J. Wallace, Oklahoma City  
Discussion opened by Dr. J. H. Sanford, Muskogee.
6. "Gonorrhoea in the Female".....Dr. L. M. Sackett, Oklahoma City  
Discussion opened by Dr. D. L. Garrett, Altus.





DR. W. ALBERT COOK, Tulsa


PRESIDENT, OKLAHOMA STATE MEDICAL ASSOCIATION, 1917-18

Dr. Cook was born at Charles City, Iowa, July 10, 1875, educated in the Charles City High School and Iowa University, graduating from Medicine in the Rush Medical College, May 26, 1897. His practice is limited to eye, ear, nose and throat work.



# THE JOURNAL

*of the*



## Oklahoma State Medical Association

VOLUME X

MUSKOGEE, OKLA., JUNE, 1917

NUMBER 6

### PRESIDENT'S ADDRESS.\*

CHAS. R. HUME, M. D., Anadarko, Okla.

Gentlemen of the Oklahoma State Medical Association:

We have met again in annual conference to exchange our friendly greetings, to lay our contributions upon the altar of science, and to renew the pleasant and profitable acquaintances which have arisen through these annual meetings.

I wish to take this occasion to thank you most heartily for the great honor accorded me by your selecting me for president of this association. It is an honor that any doctor, however modest, does appreciate and I prize it all the more on account of its having been unanimously bestowed.

These annual meetings of our association are to us perhaps the greatest way-marks in the journey of our professional life. We may well pause and review the past, that we may regain courage and strength from the contemplation of our achievements and successes, and be led to exercise a greater caution in view of our mistakes and errors in judgment.

Contemplating our progress from a scientific standpoint, we note its gradual but constantly progressing dis-enthralment from the shackles of erroneous hypothesis in which too hasty and incautious generalizations of the past had bound it; and its continued and progressive upbuilding on the broad and sure foundations of demonstrated and incontrovertible facts. Indeed, in view of the achievements of the last few years, it is not too much to say that no problem in the science of life should hereafter be so intricate that it may not be solved by intelligent and persevering research.

A quarter of a century ago, as a pioneer physician in this vicinity, I frequently had occasion to travel the irregular and winding trail blazed between the foothills and mountains of this now famous Wichita range. This beautiful park, where we are now assembled, abundantly watered by the pent-up waters of the little meandering mountain stream, Medicine Creek, my prophetic vision failed then to picture it is an ideal resort and meeting place for busy physicians—metropolitan and rural—easily reached from any part of the state by a modern system of rapid transportation.

I should then have disputed such a prophecy, and predicted rather that it would be an ideal place for "Oslerized" members of our profession, who might be seeking a quiet retreat in the wilderness, where they might meditate in solitude for the three years preparatory to their final demise by the chloroform route.

It seems to be an appropriate custom in addresses of this character to review

\*Delivered at Medicine Park, May 8, 1917.



at least briefly our accomplishments of the past, and to point out some of the needed reforms we should strive to effect in the future. We have now completed ten years of this organization, which was formed by the amalgamation of Oklahoma and Indian Territory medical associations.

Reviewing briefly the history of these pioneer territorial organizations, I find that twenty-four years ago (May 9, 1893) the Oklahoma Territorial Medical Association was organized in Oklahoma City. Dr. Delos Walker, now deceased, was the first president; Dr. C. D. Arnold, El Reno, secretary. Indian Territory Medical Association was organized May, 1889, at Muskogee. Dr. B. F. Fortner, president; Dr. Oliver Bagby, secretary, both of Vinita. These were both live, up-to-date organizations when statehood was consummated and capable of doing the good work accomplished since their union. It would be interesting, had I the time, to review in detail the accomplishments of these pioneer organizations and mention the prominent individual promoters. Most of these are still with us and active workers in this society.

I want to urge upon the membership in general a greater interest in the County Society work. Every line of business and every profession is seeking through organization to better the social or financial condition of its members; but the difference is that while industrial, mechanical and business organizations have as their primary object the betterment of the financial conditions of their members, our profession, having for its primary object the service it can render humanity, seeks through organization to better equip and qualify its members for this service; to protect the public against the ravages of infectious and preventable disease, and to protect them from the ignorant and vicious horde of charlatans. Then as the better preparation and equipment of the present-day physician better qualifies him for his work, his services are more appreciated by his patrons and his compensation is correspondingly increased.

The County Society is the unit of organization and the State and American Medical Associations are aggregations of these units. The individual benefit derived through membership in the county society should be impressed upon every eligible physician in the state. Insurance companies all inquire of what medical associations an applicant for medical examiner is a member. Names for enrollment in the United States Medical Reserve Corps are selected from a list of society members. These and many other opportunities for professional preferment are only available through this channel. The American Medical Directory for 1916 estimates about 2600 physicians in this state; less than sixty per cent are members of county societies. Estimating that at least ninety per cent of registered physicians are eligible to membership we still have more than 800 eligibles in the state not members.

There are nine or ten counties in the state not maintaining organizations at the present time. Several of these counties have been organized at some period in the past but have allowed the organization to lapse. I know by experience the discouragements met with in effecting a scientific, working society in a county composed largely of rural practitioners, but an organization at least can be perfected in each and every county, and with a united effort on the part of our district councilors and county society officers, a working unit will be developed that will be helpful to every physician participating.

It is a pleasure to be able to state that the 1917 Oklahoma legislature took an advanced and liberal view of the necessity of enacting legislation calculated to benefit public health work, and protect the people against the horde of ignorant charlatans, seeking a legal right to impose upon their credulity.

In behalf of our membership I want to especially thank the legislative committee for what they were able to accomplish in the enactment of a law defining what constitutes the practice of medicine in this state. It is to be regretted that in the closing hours of the session the conference committee were unable to secure the attachment of the emergency clause. Already the opposition has begun the

circulation of a referendum petition, with a hope of suspending the law, but our committee will be on the alert to forestall any effort they may make.

The readiness of the individual legislators to become interested and active in the enactment of these wholesome laws was due largely to the campaign of education instituted by our physicians prior to the last election, by impressing the people with the fact that all legislation advocated by the profession is for the benefit of the public at large, and designed to protect them against the ravages of preventable diseases and ignorant and vicious charlatans.

The Department of Public Health is wisely administered under its present competent Commissioner, Dr. John W. Duke. Through his efforts the 1917 legislature in the interest of the public health enacted three laws that should be mentioned: A Vital Statistics Registration law; a Sanitary Engineering law and a law giving the board of health control over the manufacture of soft drinks. The vital statistics bill accords with the model bill endorsed by the American Medical Association and the Director of the U. S. Census Bureau. It is expected that our state will be placed in the registration area when this bill becomes effective—a distinction now accorded, I understand, to only sixteen of the states. The sanitary engineering law will place under the State Board of Health the oversight of all public and private water supply systems in the state. A detailed report of the anticipated good to the cause of public health when these new laws are enforced will doubtless be heard at this meeting.

The high standard of preliminary education now required for matriculation in all medical schools prohibits the present-day medical student from paying his way by devoting part of his time to following money-making pursuits. In fact the work of public health and preventive medicine demands so much of the present-day physician that the state by right should assist largely in his preparation.

The so-called university plan, a six years' combined course, most nearly fulfills this obligation of the state. We have in the Medical Department of the Oklahoma University an institution destined to offer a course equal to that of the sister states. The first two years given at Norman are taught in a systematic way; complying with the requirements of the Council of Medical Education six full-term instructors now have charge of the work. The two years clinical work under the able and efficient superintendence of Dean LeRoy Long, assisted by an able corps of professors and instructors, is given in Oklahoma City. This course from the standpoint of proficiency is equal to that of any one of the twenty-seven state universities that are at present grade A, and heretofore it has only lacked the required hospital facilities.

Through the efforts of Dean Long, assisted by our educational committee and vigorously advocated by the profession at large, a bill appropriating \$200,000 for the construction of a university hospital was passed by the legislature and was approved by the governor. This hospital completed, we are assured by the council of medical education of the A. M. A. will advance us to the grade A, and enable us to offer to our young people a medical education in every respect equal to any of the older states.

The single board of medical examiners, composed of representatives of each so-called school of medicine, was incorporated in our first medical practice bill, adopted after statehood. The wisdom of this plan, whereby all applicants of whatever so-called school of medicine are required to pass the same examination in the fundamentals before the whole board has been abundantly proven. This policy was recently upheld by our law makers when disciples of the latest fad of the healing art were attempting to procure license through a separate board.

The fairness of such a requirement for every applicant for license is apparent to every reasonable man.

Our State Board has reciprocity with twenty-two states, including among the older eastern states Maine, Virginia and Ohio. In the west California and New

Mexico. The board has constantly been raising the standard of admission until we rank favorably with any of the states. It does not recognize class C colleges. It is an active member of the Federation of State Boards of America. All of which gives us a high rank with other states.

Our State Medical Journal is now completing the twenty-fifth year of its continuous publication. January, 1893, Dr. O. E. Barker, of Guthrie, began the publication of the Oklahoma Medical Journal. Editorials in the first issues advocated the organization of a Territorial Association, which as previously stated was consummated in May following.

In 1908 the Journal was taken over by the Council of our State Association and became its official organ. Dr. Barker was retained as Secretary-Editor until May, 1909, when that office passed to the present incumbent, Dr. Claude A. Thompson. The editor is to be complimented upon his success in keeping its advertising pages free from reproach by weeding out undesirable advertising; for promptness in publication and for maintaining an editorial department, the peer and often the superior of journals of the older states.

There seems to be some misunderstanding, or lack of understanding, regarding the medical defense bureau of this Association. Medical defenses have been taken up in more than twenty-five states. Not a single state has abandoned the plan after once adopting it. It is not optional. This is as it should be. No state has undertaken to conduct it with an idea of profit. The per capita cost is so little; the individual benefit that might accrue to the most humble practitioner is so much that a careful consideration of the plan should convince the most skeptical.

We should urge the enactment of a law requiring the state to furnish antitoxin free to everybody. Iowa and Illinois have such a law and probably other states. Antitoxin is necessarily expensive. With diphtheria, especially in country practice, the physician rarely sees a case until it is well advanced, when there is a need for a large quantity. The red tape required to procure it in indigent cases, the tendency to economize in quantity with those willing but not abundantly able to pay, all tend to embarrass the physician and jeopardize the patient. A depot of supply maintained in every community, easily and readily accessible to every physician would be a boon to humanity. It would seem rational if our law-makers would exercise a little more solicitude for budding humanity, while doing so much for pigs and calves.

A new duty confronts the medical profession today: that of supplying from its ranks such medical skill and service, both in quantity and quality as a country in a state of war will require.

Various phases of medical preparedness have been under discussion for many months past. Modern surgery, hygiene and sanitation have demonstrated their practical value in the handling of large bodies of troops. To raise our army to its full strength as provided by the Defense Act of 1916 calls for one thousand additional officers. The recent call for 500,000 men will require 3500 more physicians; and if as has been suggested an army of two million men is likely to be trained within the next two years, then 12,000 or 14,000 medical officers must be trained with them. Besides the extra need of physicians on account of the declaration of war the medical departments of the navy and army are urgently calling for young men, under 32, to enter the service permanently. This quota must necessarily be recruited from the more recent graduates. Since 1912 there have been graduated 22,000, including 1917 classes, in all colleges in the United States, an average yearly production of about 3,750.

To meet all these demands will require nearly ten per cent of the entire medical profession, making Oklahoma's quota 260 physicians. Eliminating those above the age limit and the physically disabled it will draw heavily on our able-bodied younger members. Our state committee for medical preparedness at a recent meeting addressed a letter to each county society requesting the appointment of a county committee to co-operate with the state committee. This subject which



has suddenly become of such vital interest to the profession and the country will be fully considered during our deliberations at this meeting.

In conclusion I wish to commend the work accomplished in the various sections. The chairmen and other participants of these sections have devoted much of their valuable time in preparing for this meeting. You will find a well-prepared program awaiting you in each of these. In behalf of these chairmen we invite the membership present to be ready to answer roll-call in the section of your choice and participate in the discussions under consideration.

Let us make this annual meeting the most profitable in our history as well as one to be remembered for its social pleasures. I thank you.

## EXCUSE FOR THE CREATION OF THE SECTION OF GENITO-URINARY, SKIN AND RADIOLOGY.\*

### Chairman's Address.

CURTIS R. DAY, M. D., Oklahoma City

The organization of this new section for the State Association is not a small matter. We believe as do men in other lines that we are handling the most important branch of specialties in the association.

We therefore trust that this section may from its very beginning be one of the best attended and most instructive sections of the State Association.

It has been said more progress has been made in the science of medicine, or that medicine has become more of a science, within the last twenty-five years than in all previous time. Surgery has kept abreast with this progress, specialties have made great progress with the exception of skin diseases, until the last four or five years. We have been satisfied until within the last few years with the names given to the various skin conditions by men with imaginative minds, with fine discriminations of the various kinds of lesions, designating different so-called diseases that some men were able to describe where only the most expert diagnostician could differentiate. Many different forms of eczema were thus enumerated as were also a variety of lichen, impetigo, acne, erythema, dermatitis, herpes, pityriasis, lupus, tinea, and many other so-called skin diseases. The time honored custom of naming some new diseases for the man who first described it, has been hard to get away from.

Today we are confronted with new things in dermatology and we find ourselves caught in the drift of a different kind of thought. We are taking up the newer fads in medicine and are clamoring for a new classification of skin diseases. Different men are anxiously attempting to show that widely different factors are causative agents in the production of the same conditions, for example: apical abscess, as the etiological factor for certain diseases, while others argue that internal secretions are at fault as the agent which is producing the same diseases, while the third man is ready to prove articles of diet are the offending factors.

Out of all the present chaos, let us hope, is to come something rational. Much has already come, the old classification of lupus, tuberculous varicosa cutis, scrofuloderma have all been displaced with the simple term of tuberculosis of the skin. Impetigo, erythema, furunculosis, etc., are giving way to pus infections of the skin.

The various forms of erythema, urticaria, pruritic, prurigo and like conditions are now being considered by some authors under the head of skin manifestations of gastro-intestinal disorders.

The list of angio-neurotic diseases such as herpes, etc., are giving way to a theory of lack of metabolism, likely due to abnormal conditions of internal secretions and under this classification, some of our enthusiastic investigators are at-

\*Read at Medicine Park, May 9, 1917.

tempting to place quite a few conditions, the etiology of which has hitherto been lacking. It is pointed out by these investigators that psoriasis, ichthyosis, the various lichen conditions, in fact all exfoliative conditions, are the result of some such fault. The peculiar action of the thyroid gland, super-renal glands, the pituitary body, etc., are pointed out and the effect of their substance upon the skin is demonstrated in proof of their claim. Just how far this theory will go remains to be seen.

The eczema are in a very questionable class at this time. Some holding firm to the belief that they are manifestations of some focal infection of the body while others are ardent in the belief that error in diet is the sole cause of the malady.

The various preparations which are now being used to demonstrate food idiosyncrasy or allergy may prove of value in certain classes of cases.

From the character of the lesion some investigators claim that they are able to locate the area of gastro-intestinal involvement and there are some good reasons why this appears to be true.

We are to be congratulated that the dermatologist has gotten away from the ancient means of diagnosis, that they have discarded the time honored customs of naming conditions from some man's fancy and have entered the field of investigation. We may hope that the time is at hand when scientific reason will guide the classification of skin conditions. Then simplicity will displace the mystery that has so long been thrown around the diagnosis of skin diseases.

The progress in diagnosis and treatment of genito-urinary and venereal diseases made in the last decade is equal to, if not greater than, that of any other branch of either medicine or surgery.

We need only to cite the bacterin, the intravenous and intramuscular methods of treatment and complement fixation methods of diagnosis, as proof of this fact. This section will from time to time fully demonstrate this fact with papers and discussions.

X-ray is adding much to our specialty in many ways. New things are being learned through this agency both in the way of diagnosis and treatment of diseases. We do not claim that X-ray belongs to this specialty, but we realize its usefulness in all branches of medicine and surgery.

Let those of us who were instrumental in the organization of this section keep our shoulders to the wheel and make this the banner section of our State Association.

---

### CHAIRMAN'S ADDRESS, SECTION ON PEDIATRICS AND OBSTETRICS.\*

LEE W. COTTON, M. D., Enid, Okla.

As an introduction, I desire to kindly thank you for the honor you conferred upon me, one year ago, by selecting me your chairman of this section on Pediatrics and Obstetrics. I want to also express to you my gratitude for your cooperation, and especially am I indebted to our efficient Secretary, Dr. C. A. Thompson, for his timely suggestions and assistance.

I believe today, as I did a year ago, that we made a mistake in combining the two sections, Pediatrics and Obstetrics.

Pediatrics, including infancy and childhood, deals with the most important period of human life, and studied from its various angles, has an unlimited field of usefulness. It should be the best attended and most important section of any in our convention, and there should be no entangling alliances with any other division to retard its progress and field of usefulness.

Since the untimely and tragic death of Rachel, as she was journeying with

---

\*Read at Medicine Park, May 8, 1917.

old Jacob, from Bethel to Bethlehem, down through all ages to the present, no other subject or theme has been so glorified in history and art as "Motherhood."

To preserve intact the full strength and vigor of the mother should be the highest ambition of every obstetrician, and anything short of his best efforts and full duty should stigmatize him with criminal negligence.

The section of obstetrics demands our most earnest consideration, and in order to obtain the greatest success, it should be kept aloof and separate from other sections.

**Modern Medicine.**—"The age of giants in medicine has passed into history and with it much of the romance of personality that formerly surrounded medical practice. The struggle of the keen intellects of by-gone days to penetrate the dark veil that enveloped the origin of disease, the shrewd guesses at what we know now to be the truth as well as the promulgation of many theories, now known to be false, arouse our admiration and sympathy."

The worship of individuality has given way to the elevation of mediocrity and to the advantage of the common welfare.

In medicine, as in war, success lies not with the genius but with him who is able to make use of technical skill. This radical change has been brought about mainly by one agency—the medical laboratory, and the modern practitioner is competent or incompetent in proportion to his general familiarity with and employment of laboratory methods of diagnosis and the institution of treatment which frequently depends upon them.

**Infant Mortality Rates.** The death rate of infants in the U. S. is astounding. Reports showing infant mortality rates in the 241 leading cities of the Union in 1915, give a general average of about 100 for every 10,000 of infantile population. A general average of 12 of the largest cities showing the highest mortality is 153 per ten thousand. The Gulf region has the highest mortality, yet Pennsylvania has an infant death rate of about the same. Infant mortality rates are not governed materially by climate. Climate alone has little to do with infant mortality. Intelligent and modern dairy farming; modern methods of milk distribution, and the family physician's influence in the home teaching and preaching the gospel of cleanliness, the quantity and quality of foods, etc., are factors which greatly reduce infant mortality.

A great health movement is sweeping over the entire world. Hygiene has repudiated the outworn doctrine that mortality is fatality, and must exact year after year a fixed and invariable sacrifice. Instead, it aims to set free human life, by applying modern science. Science, which has revolutionized every other field of human endeavor, is at last revolutionizing the field of health conservation.

The practice of medicine, which for ages has been known as the "healing art," is undergoing a gradual but radical revolution. This is due to the growing realization that an ounce of prevention is worth a pound of cure. As teachers and writers on hygiene, as trainers for college athletes, as advisers for the welfare department of large industrial plants, and in many other directions, physicians are finding fields for practicing preventive medicine.

Preventive medicine and hygiene are especially applicable to childhood and youth, as it is now an established fact that all the preventable diseases have a powerful retarding and deleterious effect on the child's mental, moral and physical development.

Dr. Snow, in writing for the American Social Hygiene Association, says: "Preventive medicine finds its greatest unsolved problem in the venereal diseases. They menace our national and racial health, not only by immediate sickness and disability of those who contract them, but even more seriously by their more recognized later results, such as sterility in both men and women, mental degeneracy and diseased and defective children from birth. The policy of silence on questions related to sex and reproduction, stands condemned by its results, and the Associa-



tion advises the giving of sex information in childhood, adolescence, and adult life by parents to their children, by normal schools, colleges and universities to students and then extension courses to others. Suitable lectures and talks to selected groups."

The educational efforts made the past few years have met with a degree of success, fully comparable with that attained in dealing with tuberculosis. During the past twenty-five years the average life has been increased more than ten years, and until within the last ten years no one dared to talk in public about social diseases.

Dr. Victor C. Vaughan, President State Board of Health of Michigan, says: "No man can carry about with him infectious diseases without endangering others, and that personal liberty should stop when the health of others is endangered. The nation as a whole cannot be strong as long as a part of it is diseased. Preventive medicine is the keystone of the triumphal arch of modern civilization."

One of the most satisfying tasks for any man or woman today is to take part in this movement toward truer ideals of a perfect manhood and womanhood. When middle life is reached, and often before, our vital surplus has usually been squandered, and it should not be so. Vital surplus should not only be safe-guarded, but accumulated. It is the balance in the savings bank of life.

---

## CHAIRMAN'S ADDRESS, SECTION ON EYE, EAR, NOSE AND THROAT. REPORT OF CASE.\*

A. W. ROTH, M. D., Tulsa, Okla.

For the honor you have conferred upon me when you selected me as Chairman of this Section, I wish to thank you.

It has been some task to arrange our program and it is to this end that I wish to call your attention, hoping that in the future, we may all do our part promptly, and thus lighten the burden of the Chairman. It has taken over one-hundred and sixty letters to make the arrangements this year.

We have a large number of men in this State who should be in our section, helping to build it up to full (war) strength. Yet, when I look over the old programs I find the same names form a large part of the list, and when we look over the faeces in attendance at our meeting, largely the same men are seen.

My first efforts this year were to enlist new men and I met with poor success, and as the time grew short, I was forced back into the ranks of the faithful. I wrote repeatedly at first, and few and very much delayed replies came; then as I took up the men who are always on hand, I got more prompt and favorable results, and the personnel is largely that of former years.

We are all busy men and if our Section becomes what it should, we must make sacrifices and put ourselves into the work, for the more we put in, the more we get in return.

I always look forward to our annual meeting with much anticipation, for it offers an opportunity for renewing old acquaintances and making new ones; and to exchange ideas, and I have never attended a meeting, without feeling that I have profited much.

If each man will do his part promptly; reply to your Chairman's letters; offer suggestions at any time, we can develop a section as good as any in the State Society and it will reflect credit upon each member. When a new man appears in your city, enlist him for service and attendance at our meeting. Our section is one of the best attended of any of the sections of the State Society.

I wish to thank each man who has helped to make this meeting a success.

---

\*Read before Section on Eye, Ear, Nose and Throat, Lawton, Medicine Park, May 9, 1917.

### Report of Case.

In presenting the case report, I have selected, I am not offering anything new, but rather hoping to stimulate more plastic work among our unfortunate cases.

This is a case of totale symblepharon resulting from trachoma and operative work, a sad sight when first seen. In symblepharon anterior, we have a condition which may cause very little difficulty or damage. The band does not extend to the fornix and the cul-de-sac is present, therefore breaking up the adhesion and keeping it free, relieves the trouble.

Symblepharon posterius, the adhesion extending and including the fornix, makes a very much more complicated condition.



Symblepharon totale takes us into the very depths of the trouble, the complete union of the palpebral and bulber surfaces, the cul-de-sac obliterated.

In the case for consideration today, we have complete obliteration of the cul-de-sac and total union of the two surfaces—these adhesions were firm, motion limited to such degree that the eye ball was practically fixed.

The history is as follows: K. S., girl, 12 years old; German; poorly nourished and very nervous. Came to my office on October 11, 1916, wearing very dark glasses and a patch on left eye, head hanging down and complaining of photophobia.

The mother stated that in March, 1914, there developed sores over the entire body, following vaccination. These sores were about 3-8 of an inch in diameter,

first presenting as blisters, full of thick water breaking down into sore spots. The physician got the sores healed up in a month.

In May, both eyes became sore and were treated, but grew worse, the lids and eyes finally got so they would not move. The attending doctor told the mother the child had granulated lids. The vision was normal.

On May 27, 1915, she was operated upon, the upper left tarsal cartilage removed. Later the right tarsal cartilage. In December the lower left lid was operated.

After the last operation, a thick fleshy looking tissue grew over the left cornea, entirely covering it, and a thinner one grew on the right, but did not cover the pupil.

When she came to Tulsa in May, 1915, the child was in good health, but since has failed a great deal. Up to the time I first saw her, October 11, 1916, seven operations had been performed upon her eyelids. The examination revealed the right eye as follows: Upper lids adherent in places, but could be raised enough not to interfere with vision, but required a decided voluntary effort on the part of the patient to raise same. Lower lid is contracted and adherent to the globe. The new tissue growth laps over the cornea, leaving a horse shoe shaped space of clear cornea. Toe of shoe placed downward just below the pupil and extending upward to the sclero-corneal junction. This clear space is about 6 mm. wide, pupil is very small.

The left eyelids were adherent at the sclero-corneal border above and below. The entire cornea covered with a fleshy looking tissue and on top of this tissue, the thick wide band seen clearly in the accompanying picture. The lacrymal apparatus destroyed—the surface dry and scaly and vision projection of bright light through outer quadrant.

The case was put on tonics, the eyes given regular cleansing, an ointment to soften the tissue over the cornea. This treatment was kept up for sometime until the child's general condition was much improved.

The child had been through so much and had such a bad record for anesthesia, we felt that it was due her to have a rest from operative treatment and that her condition should be at its best before another operation was undertaken.

On February 17, 1917, we did a Thiersch's skin graft. The dissection was tedious as the adhesions were complete over the entire surface. The dissection was carried well back, leaving the lids perfectly free and globe freely movable; the hemorrhage controlled and the surface thoroughly cleansed and foreign tissue removed. Canthoplasty performed—a thin lead cup was shaped to fit the globe, then a large piece of skin was taken from under the arm, close up into the axilla, the cup was completely lined within and covered on the outer side, inserted over the globe and the lids stitched together and allowed to remain five days. I think six or seven would be better because there is less danger of detaching the graft when you remove the cup. A small hole, about three or four mm. in diameter in the top of the cup gives an opening through which the point of your scissors may be inserted when you split the cup to remove it.

The results are gratifying as the upper eyelid can now be raised and lowered. The lower lid is free but there was not enough tissue left as a result of former troubles, to do much with it, as it was only a band of scar tissue. There is an adhesion at the inner canthus from the lower lid to the sclera. The vision is much improved and the patient's general condition is fine.



## TRANSACTIONS OF THE HOUSE OF DELEGATES, GENERAL MEETING, COUNCIL AND COMMITTEE REPORTS

at the Twenty-Fifth Annual Meeting, Lawton-Medicine Park,  
May 8, 9 and 10, 1917.

### HOUSE OF DELEGATES

May 8, 1917, 3:00 P. M.

Call to order by the President, Dr. Chas. R. Hume. The minutes of the last meeting having been previously printed in the Journal, it was ordered that further reading be dispensed with.

Drs. A. B. Leeds, John W. Duke and S. E. Mitchell appointed committee on credentials.

Dr. C. A. Thompson, Secretary-Treasurer-Editor, presented his annual report to each delegate present, which was ordered referred to the Council for consideration (see Reports and Resolutions).

Dr. Horace Reed, Oklahoma City, presented the problem of caring for the practices and communities of those physicians who may hereafter be absent on account of war, and the further problem of securing Oklahoma's quota for the Medical Officer's Reserve Corps. The matter was referred to a committee consisting of Drs. Horace Reed, G. A. Boyle, Oklahoma City; V. Berry, Okmulgee and to them was also referred the action of the Oklahoma County Society upon which Dr. Reed's remarks were based (see Reports and Resolutions).

Dr. Thompson, Secretary-Treasurer, here addressed the House calling attention to the petition being circulated by the Chiropractics, stating that if some 16000 signatures were secured it would in effect postpone the operation of the last legislative act until the next general election.

The President appointed Drs. C. W. Heitzman, Muskogee; C. S. Bobo, Norman; McLain Rogers, Clinton, a committee on Resolutions.

The Legislative Committee did not report on account of the absence of the Secretary, Dr. W. T. Salmon, who could not attend on account of illness in his family.

Dr. Martha Bledsoe, Chairman, Chickasha, later presented the report of the Necrology Committee (see Reports and Resolutions).

Reports of the Committees on The Study of Venereal Diseases, on Tuberculosis and on Pellagra were passed (see Reports and Resolutions).

Drs. F. H. Clark and G. S. Baxter presented the report of their committee by a demonstration of First Aid work and methods with the assistance of the First Aid Team from the Rock Island Railway Shops, Shawnee.

Drs. J. W. Duke, LeRoy Long and R. H. Harper were appointed a committee to draw up a memorial to Congress asking that steps be taken to remove the patients existing on Salvarsan and allied products.

Adjournment on call of the President.

May 10, 1917, 8:30 A. M.

Call to order by the President.

Roll call. Report of the Council was read (see Reports) and adopted. Dr. C. W. Heitzman, Chairman, offered the following from the Resolutions Committee: "That the Oklahoma State Medical Association express their sincere appreciation to the Comanche County Medical Society, to Senator J. Elmer Thomas and to all persons who have made our stay in Medicine Park one round of pleasure." Adopted. Dr. Horace Reed read the report of the Committee on war activities (see Reports). Election of officers resulted as follows:

President-Elect—Dr. L. S. Willour, McAlester

First Vice-President—Dr. McLain Rogers, Clinton

Second Vice-President—Dr. Fowler Border, Mangum

Third Vice-President—Dr. Horace Reed, Oklahoma City

Secretary-Treasurer-Editor—Dr. C. A. Thompson, Muskogee

Dr. Thompson being called, made the following statement: "I want to assure you of my very deep appreciation of this honor which you have conferred several times. I want to say this, that no man in the world can hold the secretary's job without offending someone, but I do not want you to forget that the Journal is not a private affair, it belongs to you and it is your fault if you do not tell me what you want done. I think we should have more suggestions from the county societies as to what goes into the Journal. The Secretary-Treasurer gets into a rut and you should help him out. I thank you.

Dr. L. S. Willour here tendered his resignation as Councilor.

The election of Councilors resulted as follows:

2nd District—Dr. Ellis Lamb, Clinton

7th District—Dr. N. W. Maygins, Tulsa

8th District—Dr. H. M. Williams, Wellston

11th District—Dr. P. P. Nesbitt, Muskogee

12th District—Dr. Ed. D. James, Haileyville

13th District—Dr. J. L. Austin, Durant.

Dr. John W. Duke moved, that in the event vacancies occurred on account of the war, in the officers of the Association, that such be filled by the remaining officers by appointment. Carried.

Dr. Chas. R. Hume was elected delegate to the A. M. A. for the years 1918-19.

Sulphur, Oklahoma City and Tulsa were offered as meeting places for 1918. After a speech by Dr. W. Forrest Dutton, Tulsa, all other contestants were withdrawn and Tulsa was selected by acclamation.

At the General meeting held Tuesday evening, committees were appointed at the request of Colonel Roy V. Hoffman, commanding the Oklahoma National Guard, to visit, investigate and report on sanitary, food and physical conditions and surroundings of the men at Fort Sill, and on the proposition to erect a Doctor's Home at Medicine Park. In this connection Senator J. Elmer Thomas was called on for a statement which he made as follows: (see also under Reports).

**Senator Thomas:** Mr. Chairman and Gentlemen of the Convention. I intended the other night in trying to extend the welcome of Lawton to you delegates to make some mention of this place but owing to the light proposition, I refrained. It is somewhat embarrassing to present a proposition that might seem to be something of self interest, but I want to disabuse your ideas on that part, for it is strictly a business proposition.

I started this place in 1906. I want to explain briefly the location of the place. We have here about 1000 acres. Of course if you would measure the surface there would be about 5000 acres. On one side you have the river, on another the Fort Sill reservation. On the west is the Wichita Forest Reserve. The military reservation embraces 50,000 acres. You can go for 40 miles west of this place and see no one except someone like yourself. On the east of Mt. Park is a fish hatchery, which at the present time embraces forty acres. The Government gave them this amount of land. The state has now, in addition to the 60 acres it has proposed to fence, a large portion of the valley. The Government is going to fence the Park and put in many wild animals. The state will soon acquire another 160 acres. When they acquire this land they will establish a game reserve.

So in addition to having here a State Fish Hatchery maintained for the state for those who are raising fish the state will undertake to raise quail, birds, etc.

When I first came out here I homesteaded some of this land myself, and what is here is the result of the work and the growth of this place. All that has been made has gone back in improvement. The business is getting better every year, and the more we make out here the more this place will be improved.

It is a fact that the United States will in the immediate future increase the army. This post at Ft. Sill will be one of the greatest posts in the United States. The engineers have been here and are going to put a main to Ft. Sill. The Government desires to have a water supply for a very large amount of men and they are going to put in a 24 inch water main. I think soon you will find thousands and thousands of soldiers there from this state and other states. Right to the west of us we have this game reserve which joins the park; it is about nine miles out to what they call the game reserve. You can find there about 85 buffalo and deer in the brush by the dozen or by the score, or anything you want to say. Of course you cannot build things in a day, and in a short time we will get a bridge across, and then we can have a road. Of course this not being an agricultural section, they do not build roads, so the country up to this time has not given us any assistance to build that bridge, but in a short time you will have a good road to this game reserve.

I am trying to show what I see, that this place will be a great place. The Government is working on an irrigation scheme here too, and at a very short time you will find an irrigation system will be made here. At that time this dam will be raised and instead of having a lake like now, it will be much larger. That will mean that in the season there will be more duck than there are now, and they are very plentiful.

I just want to tell you what is possible at this point. I will be glad to furnish any information you desire or answer any question. I have the pleasure to have control at Medicine Park. I own about 96 per cent of this corporation. Of course this place is not productive like a farm, but we can make it a home. We have established here a place for the boy scouts. They may come here and rough it and cook and do as they please. We expect to have a home here for the wholesale grocers.

I will tender to the members of the Medical Fraternity a chance to name their place of any that has not been sold. You can have lots, or as you need, and we will give you the best title in the world and with that will go the purchase price. The lots are 50x140. You can have as many as you want. With that goes the perpetual use of the stream and the fishing; the right to hunt in season; the right to put your boats upon the water; the right to bathe, and of course you will have to furnish your own bathing suits. You can have all you want to use of it.

During the ten years this place has been in operation I might say there has been 100,000 persons here and I never knew of an arrest.

At Medicine Park the editors, through their committee, adopted by-laws and they have been printed. The matron will be glad to furnish you these books. They maintain this building by the revenue from the building. The editors that come here pay 25 cents a day; the guests pay 50 cents a day for living here, that is the guests of the editors. That does not take care of the board. The editors can buy their own provisions and cook if they wish. From the fees they receive they support this place. Of course heretofore their accommodations have not been very extensive. We frequently send over-flows and others here to get rooms. It is not purely a money making proposition. It is a cooperative plan, and the taxation is very light. It is not incorporated and taxes are very low. They amount to practically nothing. You can get water and the water rate is practically nothing. You will have the benefit here of the sewer system we jointly built and you will have the benefit of electric light system later. We have had the promise since January that the generator would be here, but it has not come. When it is installed any club house or private residence will have the lights.

If there are any questions you gentlemen desire to ask, I will be glad to answer them. I desire to explain it thoroughly before I conclude. I expect to stay here. I have no other place to go, and I would be glad to have you.



I want to thank you for the privilege of presenting this proposition, and I hope in the near future the medical profession will be located down here.

After discussion by Drs. Byrum, Boyle and Duke, Dr. Duke moved that a committee of not more than five physicians residing near Medicine Park be appointed to investigate all phases of the matter, report to the Council, perfect organization, take steps to solicit subscriptions and do whatever necessary. Carried. The President appointed Drs. E. B. Mitchell, D. A. Myers, Lawton; G. A. Boyle, Enid; Horace Reed, Oklahoma City, and A. B. Leeds, Chickasha.

It was ordered that all committee reports be published in the Journal.

Dr. Hume here introduced Dr. W. Albert Cook, President for 1917-18.

Adjourned.

### GENERAL MEETING

Tuesday, May 8, 8:00 o'clock, p. m.

Meeting called to order by Dr. Hume, President.

Invocation—Rev. T. J. Irwin, Lawton, Oklahoma.

**Address of Welcome—Senator J. Elmer Thomas, Medicine Park, Oklahoma:** "Members of the State Medical Association, Ladies and Gentlemen: I am indeed sorry that our lights are not better but always in a place of this kind, some twelve miles from a railroad station, you will find something happens to interfere in a meeting of this character. I hope the lights will soon be better. An effort is being made to improve them, and begging your pardon for this unpleasant feature, I trust the balance of the meeting will not be so marred.

On behalf of the local association at Lawton, and on behalf of those who are interested in this place, I desire to extend to the Doctors of the State of Oklahoma and their ladies, the most sincere appreciation of your presence it is possible to express. It is a little bit unusual for a state convention to meet in a small place. Even a city of some thousands probably finds difficulties in finding places for so many delegates, and in a place of this kind it is likewise hard so far away from the railroad. You are now away from civilization, you are in the mountains, we call them mountains because they are all the mountains we have; you are away from the city life, and if you will bear with us we will give you the very best we have.

Your chairman has made some remarks about legislation, and that some doctors do not take such matters seriously enough, not as seriously as other people do. Guess you are too busy. But I want to say that doctors, the past few years, you doctors of this state, have taken an interest in legislation that is commendable. If those who know what ought to be done do not take an interest in that line, it is hard to accomplish anything. Legislators are not doctors as a rule. They are a composite body. We have about two or three doctors, druggists, and also every other profession in the state was represented in the State Senate, but the doctors were very active men and they had an active committee and have always had an active committee in the legislature, and the laws in this state today relating to the practice of medicine and hygiene, and things of that character, will measure up well with other states in the Union. I want to commend the committee that waited on us the past year. They had some trials and tribulations. I see a great many doctors before me today, but there is one who has been before most all the legislatures that I have not met, Dr. Carver. I do not wish to make any comments upon the unfortunate situation that occurred at the legislature last year. You have all heard of it.

My friends it is with a most sincere pleasure that I myself being somewhat interested in this place, welcome you, one of the greatest professions of the state and nation, to this place. We are now in a condition of war and many of you will

be needed to take care of the wounded. You can perform a great service in that regard, and you must perform a great service. An army is not composed entirely of the boys that wear the uniform, the cavalry, the engineer, etc. Behind that army must be the surgeon, the physician. Behind the boys that go forth to the front must be an organization to provide the food, the clothes, etc., for that army, and the boys who break the soil and plant the grain play no small part in the army of this country. It is for this Nation to decide on these things and prepare this organization, and in that organization your fraternity, my friends, must and will play an important part.

I trust your stay here will be profitable and I surely hope it will be a pleasant one. There is nothing that can be done locally if you will let your wants be known, but what every effort will be made to meet that want. I know our committee from Lawton are working hard and I want to thank them, and I trust your stay here will be satisfactory and pleasant, and expressing the appreciation of your presence I herewith close. Thank you.

**Response—Dr. LeRoy Long, Oklahoma City:** Mr. President, Senator Thomas, Fellows of the Oklahoma State Association and ladies: I can conceive of no more pleasant duty than to be designated to speak to a great association made up of intelligent men as this association is on an occasion of this kind. It is a distinction of which any one should be proud even though he feels that he may not be able to bear the responsibility it brings with it and feels unworthy of the confidence it implies. It is an honor on any occasion, and at this particular time it gives me double pleasure for the reason I am able to respond to the welcome given us to Lawton and Medicine Park by the distinguished Senator, who has shown himself always to be a staunch supporter of our profession; in the Senate a man of few words, but when he does open his mouth facts and figures come out so quickly there is no stopping him. I think we ought to be proud of a man like J. Elmer Thomas, who will act independently of any ulterior motive. The time has come when there is a closer relationship existing between the public and the doctor; the time has arrived when we begin to feel we have a common interest at stake, the doctor and the layman; we are all subjected to the same dangers, your wife and mine, your children and mine; when your loved ones suffer, the result of poor health conditions, mine do not escape. A big majority of these diseases is a matter which concerns the community for its existence depends usually upon conditions over which the community has entire and complete control.

The time has come when we are enthralled in a great national war; if we win in this war; if we succeed in carrying out the success of a civilized people we must organize all our resources, and it remains to us as a medical profession to see that we render the professional service when it is needed. The young men of this country who go to the trenches, and who are ready to face innumerable dangers, deserve the services of the experienced men of the medical profession. It is not enough for a man to have a diploma to his credit, but we who have gone through years of experience should go forward to care for our young men. Let me conjure you, therefore, my brothers of the medical profession, that this patriotic duty be carried out.

To sum it all up, we have come to that time in the history of the world when we begin to learn more and more that no man can live to himself alone; each of us depend upon what our brother does. It is necessary, therefore, that each man perform his duty, in which he works to the end that our country and our families may be protected and saved. Let us therefore assume the responsibility of being our brother's keeper and protect him from disease and death; let us render care for the sick and wounded, and help the suffering; let us use our time, influence and means to make the world a better place to live in. Let us, my friends, do all we can to drive away dark despair and to bring sunshine and happiness into the homes and lives of all our people. Thank you.

**"A Home for the Doctor"**—By E. S. Gooch, Lawton: My subject, "A Home for the Doctor." This idea was initiated, I believe, by one of our good kind and generous patrons, that it would be proper and appropriate and befitting for the Doctors of the State of Oklahoma to have a home, and that home to be known and designated as "The Doctor's Home."

The subject has been presented to several of the County Medical Societies in the southwestern part of the state, and has been presented to a great many of the doctors of the different portions of the state, and it has met almost with their unanimous approval. It was thought at this time, and at this place it would be proper, in fact that this would probably be the psychical time to present this to the state medical men for their approval or disapproval.

Let it be understood in the beginning that this proposed home for the doctors is to be no part of the medical association; that if this home is built it is to be erected by the generous gifts of the medical men of the state. Now I, and some of our friends, located at Lawton and this community, have had a hesitancy in putting this matter before you on this occasion for fear we might not be understood. We know Medicine Park, as the place proposed for this building to be erected, being in the southwestern part of the state is not exactly centrally located and we feel that some of the boys on the east side of the state, if we ask them for a donation, might feel that the boys down in Lawton and neighboring towns wanted us to assist in erecting a club house for themselves.

However, it has been insisted upon by those who have the matter in hand that this be presented at this time.

The building we are now in, erected by the editors of the state, has proven to be very satisfactory for the purpose for which it was built, and we feel that if we had a doctor's home at Medicine Park they could have a home where they could always be provided for and accommodated.

We feel that Medicine Park at the present time is capitalized for a sufficient amount of money; and its surroundings and other advantages speak for themselves a future; it is about the only place in the state that affords rest and recreation; we have been somewhat encouraged by the doctor's in the different parts of the state, saying it would be appropriate for doctors to have a home. At this place, the Editor's home, they have many cots, many rooms, and anyone who has an interest in it comes here; they can have their own meals if they wish and have their own beds at a nominal fee. I do not know what the rules are only I know that they hire a housekeeper and that this building is self-supporting.

Now there is a great deal to a doctor's home; we have our medical societies over the state; we have met for the purpose of improving ourselves in a professional way. In this home we would meet; we would get acquainted; we would get in closer communion with each other. We recall, most of us, some twenty years ago that men, doctors, hardly ever got along in the profession, and I recall in the little town where I was born and raised there were four physicians and none of them spoke to each other. They could not get along. That time is past. It seems that the erection of a doctor's home would give us not only a place to rest but should bring us closer together. This is a matter, however, that is brought up for your consideration. I realize perfectly that the matter should have been brought up by someone located at some other place. I think that if the proposition is brought up for discussion that the doctors should decide whether they want a doctor's home.

Doctors, in our last legislature there was a very important question concerning the doctors. A number of the doctors were interested in this question, and we made an effort to get the practice of medicine placed on the proper standard. In that bill it was brought out, the question of qualification. It was an honest bill; it was a bill asking for nothing but what was right. It was presented to some of our legislators who were kind enough to give us a hearing and take up for consideration, the question of requiring satisfactory qualifications for a physician.



A little while later there was a representative of a certain profession who brought a violent charge against this bill, which he said he could prove to the legislature. This he failed to do.

Now we have Senator Thomas and Senator Logan with us. Senator Thomas, if they wish to erect this home, offers them a free lot, or lots. Now as a monument to his fairness, and devotion to the doctors' cause it seems to me that if the doctors of this state want to do something for a man who has taken up our fight, it would be well to erect this home. If the doctors in the eastern portion of the state; if the physicians in the northern part of the state do not see fit to help us in the erection of this home because they are so far away it is left to the doctors that are accessible to Medicine Park to determine whether or not they shall erect this home. It is up to you to bring it up for discussion. We hope to decide tonight.

### Discussion.

**Dr. Boyle:** I think this should be discussed in an open meeting, and if each fellow had his say it would take all night. I think it should go into the hands of a committee. I move that the Chairman appoint a committee to take action and report. Seconded.

**President:** It has been moved and seconded that the Chairman appoint a committee to make a report on this. All in favor let it be known by the usual sign. Contrary No. Carried.

**President:** I will think over this committee and name them later.

**Dr. M. M. Roland, Oklahoma City:** In regard to the question of preparedness, there are a great many physicians in the county who are not here, and some of us will soon leave here and will be unable to stay the entire time, and when we go home we will want to know something of this question of preparedness; I feel the doctors here will give us something we can depend on; something we can tell the doctors when we go home along that line.

**President:** We have Lieut. Wooley with us tonight and we will ask him to tell us something along this line, I am sure it will be appreciated.

**Lieut. Wooley:** Mr. President, Ladies and Gentlemen: I hardly know what to tell you. The medical officers' work in the army is quite different from other work. The medical end of it is rather the small part of it. I am rather amused at the men who come up for examination, and the idea seems to be prevalent that most of the work would be surgery. Most of our work is administration, not surgery. I will give you an idea; you start in early in the morning taking care of the sick; you spend about two hours making out reports, etc.; look after the hospital; act as counsel for persons in court martial and the afternoon is practically the same thing over. Sanitation is one of the greatest problems in the army medical profession. It covers food, clothing and the water supply. I had not been informed that I would make any speech or anything, but I would like to say to the men that are expecting to join the service, that I would be very glad to help in any way I can. I think this matter has been fully discussed in the American Medical Journals.

**Dr. F. H. Clark, El Reno:** A year ago at this time there was appointed a general committee of the entire U. S. of 46 of our leading physicians and surgeons to consider this matter and the number has been enlarged; they have asked that committee, of which there are nine members in this state, to secure 200 to every 100,000 people. The salaries are not large. Practically every county in the state with 10,000 population has had a committee appointed, and this is the work we are trying to do now, to raise the number. I would ask anyone who is thinking of this, to get a blank and then we can get this straight. We do not have anything

to do with these blanks further than recording them, only of course entering them upon our files. I was talking to a young fellow tonight, and he says he has examined fourteen or fifteen in the last few days. If there are any who are contemplating this, that come between the ages of 25 and 35, I will be glad to give you the blanks we have.

Meeting adjourned.

---

### Proceedings of the Council.

May 8, 1917, 4:00 P. M.

Dr. Humie announced that a motion was in order to elect a President pro tem. Dr. L. S. Willour was elected.

The Secretary-Treasurer handed to the Council his books duplicate deposit slips, cancelled vouchers and statement for the preceding year, and asked that they be audited. An auditing committee consisting of Drs. Ellis Lamb and H. M. Williams was appointed.

Moved by Dr. Willour that the report be accepted and approved. Carried. The auditing committee was instructed to report to the House of Delegates.

The Secretary called attention to the Chiropractic condition and suggested that each Councilor make it a point to aid in the matter when it shall have been referred to the county society committees having charge of the matter in their respective counties.

The bills for councilor and other expense were ordered paid on proper presentation.

Dr. W. Albert Cook addressed the Council on the organization or equipment of ambulances for war service. After discussion a committee (Drs. C. A. Thompson, W. Albert Cook, Ed D. James, McLain Rogers and J. H. White) was appointed to confer with Dr. Cook and take such steps as might be deemed advisable.

May 9, 1917, 9:00 A. M.

Call to order by the President.

Report of the Auditing Committee was received and accepted and it was moved by Dr. Willour that the committee be instructed to make report of it to the House of Delegates. Carried.

The Secretary presented a statement of expense rendered by the First Aid Squad of the Rock Island Shops, which was ordered paid.

It was moved by Dr. Willour and carried that the Secretary be instructed to pay such sums, the amount not now known, as was necessary to meet the chiropractic situation with reference to inquiring into the validity of their referendum petition when it shall have been filed, and when the bills were properly presented.

The Council adjourned.

---

### Report of the Chairman of the Committee for the Study and Prevention of Pellagra.

Mr. Chairman: It was only two years ago that pellagra held the center of the State among diseases of the South, while today the disease scarcely attracts notice either on the part of the laity or the profession. In other words, pellagra has ceased to be alarming to us within the past two years, both as regards its frequency and its severity, and we are forced to conclude that the disease is on the wane during the past year in Oklahoma as well as in other southern states.

A canvass of the state conducted through the County Health Officers, as well as a report from the State Health Commissioner's Office, has served to impress me very forcibly with the difficulty of obtaining anything like complete statistics of the occurrence of pellagra in Oklahoma. The best sources of information that we have are the death rate as shown by the Commissioner's report, and the records of the State Hospital at Norman.

The opinions of the County Health Officers concerning the comparative frequency and severity of the disease in their respective counties at the present time as related to its occurrence two years ago are however, of some value; their reports were almost unanimous that pellagra is both less frequent and less fatal than it was one and two years ago. Reports of deaths from the State Health Commissioner's Office for the year ending September 30th, 1916, showed 93 deaths as compared to 141 deaths for the preceding 12 months. This is a drop of over 30 per cent.

At the State Hospital at Norman we had 31 deaths from pellagra in the year ending April 30th, 1915, 25 deaths in the year following, and only 7 deaths in the year ending May 1, 1917, the date to which this report extends. Our total number of patients has remained approximately the same as formerly, namely: 1000 to 1050. This very marked drop in the death rate from pellagra at our institution is not due to any change or marked advancement in our treatment of these cases. It means that we have been receiving a less number of pellagrins and that the cases received have been, on the whole, less severe than formerly. The number of fresh cases of pellagra which have developed at our institution this spring so far can be practically counted on the fingers of one hand. During April of this year we have received about 5 new cases.

As stated by Dr. J. L. Day in his paper of one year ago before this Association the eastern and southern counties of the state still furnish the greater portion of the disease in the state, whereas northern and central Oklahoma are largely free from it and western Oklahoma shows a considerable diminution.

The researches by Goldberger for the U. S. Public Health Service a few years ago gave us the information that pellagra was a disease resulting from insufficient or poorly balanced diet, or more especially, from a lack of vitamins in the food. Inasmuch as these vitamins are found to exist sufficiently in milk, beans, peas and fresh meats, the country people should be *least* attacked by pellagra, since they are the producers of just these foods, whereas in fact we know pellagra to be largely a disease of country people. It is also a fact that many country people do not take advantage of their position to eat a well balanced diet especially of raw foods as milk and eggs. Many of them buy canned goods from town for many months of the year. It would perhaps be more exact to say that pellagra is a disease of the poorer classes, who necessarily subsist for long periods of time upon a very monotonous diet. If this be the case, then prosperity of the country in general should be coincident with the decline of pellagra, and adversity with its increase. This I contend is one of the main factors to be considered in the diminution of the disease since 1915, for while the price of foods has steadily increased since that time, there has been a very marked betterment of the southern people in general during this period so far as their financial condition is concerned. The country people being independent to a large extent of the soaring prices of food-stuffs should if properly educated upon the subject of what to eat continue to be more and more free from this disease. If our present view of the etiology of pellagra be correct, a campaign to prevent pellagra must be conducted principally along educational lines, both in the matter of what foods these people should eat and how they should prepare those foods. A history of indigestion extending over long periods of years preceding the onset of pellagra is commonly obtained from these people. This indigestion may have some etiological significance. The southern farmer as a rule must have three hot cooked meals a day or more, hot breads made of white flour called biscuits being the "piece de resistance" of the meal. Whole wheat breads, especially light bread is not considered by these people to be fit to eat, whereas we know that the latter form of bread is much the better balanced food and much more easily



digested. Meat, to be nourishing, should not be fried until it resembles sole leather in consistency. The broiling of the same piece of meat would leave it a wholesome and easily digested article of food.

To make the farmer and the city dweller as well realize that the pellagra-preventing foods are not expensive nor hard to obtain, and that this excessive cooking and eating of hot breads is a good way to invite pellagra is a task which faces the medical profession in general. The outlook for pellagra, it seems to me, is about this: it will steadily diminish if an educational campaign is wisely and thoroughly carried out. The factors favoring its increase, namely; the high cost of living and the ignorance of the laity as to its cause can be easily counterbalanced by the educational method. Even that greatest of calamities which now threatens our country, a war of gigantic proportions, should not be able to cause pellagra to again be such a menace to the people of Oklahoma and the South.

Respectfully submitted,

A. A. Thurlow,

Chairman of the Committee.

### REPORT OF THE COMMITTEE ON TUBERCULOSIS.

At the last annual meeting of the State Medical Association, your committee on tuberculosis was instructed to conduct a campaign of education in order that the public might have opportunity to learn more about the cause, prevention and treatment of tuberculosis.

The work of this committee has necessarily been inadequate, as such a campaign cannot be successfully conducted without funds. In spite of this handicap the committee has succeeded in having published in one of the leading daily papers, a series of educational articles.

Dr. Leila Andrews, a member of the committee, was instrumental in the formation of a class of specially selected girls in the Oklahoma City high school for instruction in home nursing. The course of instruction included a series of lectures on tuberculosis which were given under the direction of the committee.

The unusual interest displayed by this large class of girls in this vital subject, caused the committee to feel that of all its activities, this was the most effective and most encouraging. We feel assured that these girls will not only carry the preventive measures learned in this class into their own homes, but into other homes where their services are needed.

The committee has kept in touch with the work of the State Anti-tuberculosis Association and when the National Association sent their representative here for the purpose of reorganizing the State Association, two members of your committee were asked to participate in the reorganization and both were given positions which enable the committee to have a part in determining the policies and activities of the Oklahoma State Association for the Prevention of Tuberculosis.

The executive committee of the above association decided to employ a full time secretary trained in anti-tuberculosis work whose term of service shall begin July 1, 1917. The executive committee at the same time appointed a publicity and educational committee to prepare the way for the paid secretary.

The chairman of your committee is also a member of this committee and he feels that he can safely say to you that the campaign of education in this state is now on and on to stay.

Your committee recommends that the State Medical Association should lend its hearty cooperation to the Oklahoma State Association for the Prevention of Tuberculosis.

Since certain members of the profession have suggested that education of the public creates phthisio-phobia, your committee deems it wise to insist upon the fact that the occasional inordinate fear of tuberculosis, is the result of ignorance

or an incomplete knowledge, and that the only remedy is more education, therefore, we recommend that the State Medical Association continue the campaign of education in regard to this disease.

Since the war conditions in Europe have brought about a fearful increase in the prevalence of tuberculosis in that part of the world, and since we are now in the midst of a great national crisis which grips us with the fear of a serious food shortage and urges the necessity of strict economy in the consumption and distribution of food products, your committee recommends that in this time of world turmoil, that those members of the medical profession of the great state of Oklahoma strive in every possible way to direct the food economy of their respective communities in such a way that the physical strength and vital resistance of the individual citizen shall be conserved.

Respectfully,

L. J. Moorman  
Leila E. Andrews

To the President and Members of the Oklahoma State Medical Association:

As a member of your committee for the study and prevention of tuberculosis, I submit the following: I am about convinced that the present methods, now in vogue, for the control of tuberculosis are a failure. At the same time I am sure that the education of the public as to the care and treatment of this disease has been of immense benefit, at least in so far as it has popularized "fresh air" and in the prevention of promiscuous expectoration. But I am not in favor of the periodic public onslaughts against tuberculosis that are only productive of a plithisophobia. Furthermore, I do not believe that the sanatorium idea furnishes the desired end for its control. While this method may be the proper procedure for the treatment of a certain class of these patients, it does not strike deep enough. In order to put an end to this plague, we must begin at the beginning. I am quite confident that few, if any, adults contract this disease, as we understand it, by contagion. Such cases as develop in the adult, had their beginning during childhood and were quiescent for a period of time, then from some exciting cause become active. Therefore our energies, well directed towards the child by thorough examination of each individual, through the medium of well organized clinics will disclose these cases in their incipency. Thorough eradication of this disease during childhood by the means of appropriate treatment, food and hygiene will accomplish more than all the various propaganda that have been devised up to this time.

Respectfully submitted,

Muskogee Oklahoma, March 27, 1917.

Chas. W. Heitzman.

## REPORT OF COMMITTEE TO VISIT FT. SILL.

Medicine Park, May 9, 1917.

To the President of the Oklahoma State Medical Association:

We, the Committee appointed by you in compliance with the request of Col. Roy Hoffman, First Oklahoma Infantry, to visit the Oklahoma troops at Fort Sill for the purpose of inspecting the facilities for the care and comfort of sick and indisposed soldiers of the State, beg leave to make the following report:

We visited first the Post Infirmary and found it in charge of capable, well-instructed personnel, with all the facilities and materials for the treatment of the slightly ill and indisposed. This is the point where all the sick of the Post report at stated hours for medical attendance. If the illness be slight, they are treated and returned to quarters; if necessitating extended treatment, they are sent to the Post Hospital, which we next visited. We found this to be in charge of capable medical men and ward masters, and every care was being taken and comforts being provided for the sick.

We found that out of a total mean strength of about 1100 men of the Oklahoma troops stationed at Fort Sill, there were at present 19 bed patients, and the majority of these were reactions from typhoid inoculations and smallpox vaccinations.

Altogether, we consider the facilities and the manner of providing for the sick and hurt soldiers to be first-class in every particular, and equal to any care which could possibly be received in their homes. The food, while not consisting of many luxuries, is wholesome, substantial, plenty of it, and well prepared.

Fred H. Clark,  
Floyd J. Bolend,  
Ellis Lamb,  
Committee.

### RESOLUTION ON DOCTOR'S CLUB.

The Committee on Doctor's Club House reports as follows:

We, the committee, recommend the building of a Doctor's Club House at Medicine Park, upon a stock subscription plan, and the acceptance of the site for same with all the privileges of Medicine Park, so generously offered by Senator Elmer Thomas.

And further recommend that a committee be appointed to select a site, and work out the details necessary to secure the funds and have control of the construction of same.

Respectfully submitted,

E. B. Mitchell	H. M. Williams
G. A. Boyle	C. A. Thompson
Ney Neel	W. E. Dixon
	Committee.

### NECROLOGY COMMITTEE REPORT.

To the President and Members of Oklahoma State Medical Association:

The following is a list of members who have died during the past year.

Custer County—L. L. Patterson, Arapaho.  
Caddo County—D. D. Wieser, Apache.  
LeFlore County—M. O. Moore, Spiro.  
Lincoln County—J. J. Evans, Stroud.  
Logan County—F. J. Boutin, Coyle.  
Oklahoma County—J. L. Hoshall, Oklahoma City.  
Pottawatomie County—Chas. Blickensderfer, Shawnee.  
Stephens County—C. E. Frost, Duncan.  
Tillman County—J. H. Hansen, Grandfield.  
Woodward County—E. E. Flagg, Moreland.

At this time we pause in the pursuit of knowledge to think and pay respect to those of our rank who have so recently gone. True the funeral eulogy has been pronounced; the sad and solemn procession has moved; the badge of mourning has already been decreed and presently the sepulcherd marble will be placed to mark the different resting places of the dead. We would perpetuate the names of those who have given their lives in the work of relieving pain and suffering and not that alone, but have worked hard to prevent disease; to conserve life and to maintain health; and many will say of those who are gone—he was a good physician; a trusted friend; an efficient counselor, and unselfish to the end. We shall meet, but we shall miss them. Only a few years do we journey here and we come to that Bridge called Death. Such is the frailty of man. It is appointed unto man once to die, and after death, judgment. No matter how busy we are, or what position of



honor we hold or how much we feel we are needed here, we are all subjects of death; let us take flowers and strew the beauties of nature above the graves of our resting colleagues with this tender and beautiful tribute; let us linger there and consider our ways; let us take warning by the sadness of this; the knowledge that these of our beloved profession are gone from us forever, and henceforth be more ethical, more faithful, more kind to the living. Let us carry one another flowers while we have the sense of smell and sight; let us say kind words which we can hear; let us show our feeling of fraternal love all along our pathway. We all will leave behind us, our influence for good or for evil that will be felt for time to come. (A blank we cannot be).

Life is real; life is earnest,  
And the grave is not its goal,  
Dust thou art, to dust returnest  
Was not spoken of the soul.

Let us then be up and doing with  
a heart for any fate,  
Still achieving, still pursuing  
Learn to labor and to wait.

Respectfully submitted,

Martha Bledsoe,  
J. W. Pollard.

#### Committee on War Situation

We, your committee appointed for the purpose of suggesting means whereby every physician can be able to do his duty in our national crisis, beg leave to report as follows: We recognize the fact that this body can act only in an advisory capacity. We urge that the delegates of this body, when they return home, call attention to the fact to their colleagues that they owe a service to their country in some way or other, and that they get together at the first opportunity and talk over the matter to the end that they may make some arrangements.

We urge that each county society utilize their local committee on national defense to operate with them in taking a census of the medical resources of the county, including all medical physicians, and that in so far as they can, they induce members of the profession to enter the service in some capacity or other.

We further urge that steps be taken, the manner of which, to be left to each county, whereby those who volunteer to the service of the country may have their practice guarded during their absence by any method they deem best.

We, your committee, beg to report thus to you, and further to the Journal we advise due publicity at an early date, be given as to what other counties are doing, and if the editor deem it wise request, of our counties to do more.

Horace Reed  
G. A. Boyle  
V. Berry

Moved and seconded that it be accepted. Carried.

## ANNUAL REPORT OF THE SECRETARY-TREASURER-EDITOR.

For the year May 2, 1916, to April 30, 1917.

To the House of Delegates and Members of the Oklahoma State Medical Association:

Gentlemen:

In conformity with the provision of the Constitution and By-Laws, I herewith submit my report for the time above designated:

All books and papers showing receipts and expenditures in detail have been submitted to the Council and its auditing committee and any special feature you may wish to inquire into may be obtained on request from that body.

The year since our last meeting has been the most prosperous from the standpoint of finances and accomplishments that we have ever had. Naturally the work of this office and its incident expense has increased in proportion, but the balance is decidedly in our favor.

**Legislative Activity:** Cooperating with the Legislative Committee, we began early to stimulate meetings of physicians to inquire into the possible attitude of and consult with prospective candidates for the legislature to convene in January, 1917. The results speak for themselves. Wherever a county committee or society cooperated with us the results were almost uniformly satisfactory; the legislature viewing our proposals with good sense and approbation. We must remind you in this connection that possibly the work is not yet finished. As you know the Chiropractic fraternity is making desperate efforts to have the law enacted referred to the people in order to postpone what they term, "the evil day". We can probably easily defeat these worthies at the polls, but that unnecessary expense and work should be avoided if possible.

Our Journal is growing slowly in size, advertising receipts, mechanical betterment, and, it is to be hoped, in scientific worth. The expenses incident to publication have increased considerably in the last year, the exact amount being \$790.75. However, we can stand the strain as the increase in advertising receipts was \$950.28 in excess over the previous year. It is not certain our prosperity will continue on account of war conditions.

**The Medical Defense Fund:** This fund, so far, remains practically intact excepting two items shown in the financial statement. Activities of the attorneys to date are:

CASES SETTLED	1
CASES PENDING IN COURT	3
TOTAL,	4

We wish here again to emphasize that the attitude of the individual has much to do with the increase or lessening of these suits, and every individual should remember that when he is getting into trouble he is carrying his Association with him. The tendency of some physicians to boast that the patient "can do as he pleases", that he is defended by the Association, etc., only acts as an irritant to many people, determining them to make trouble. In this connection it would be well to follow the advice given policy holders by many of the indemnity companies.

We wish to emphasize too that this fund is for the purpose of defending suits for alleged malpractice only. Suits having as a basis things other than malpractice cannot be defended. Several applications for defense were made by physicians which called for rejection at the hands of the Defense Committee for the reason that the cases did not come into the class this Association undertakes to defend.

### MEMBERSHIP:

Membership April 30, 1916....1305  
Membership April 30, 1917....1363

**CONDENSED STATEMENT OF RECEIPTS, EXPENDITURES AND BALANCES  
FROM MAY 1, 1916, TO APRIL 30, 1917, INCLUSIVE.**

Balance April 30, 1916.....	\$ 1,525.61
From County Secretaries.....	4,624.47
From Advertising.....	2,756.07
Miscellaneous, (Cuts, etc.).....	11.58
Time Deposit, Surrendered.....	1,000.00
Interest on Time Deposit, 4 per cent.....	53.33

\$ 9,971.06

**Expenditures.**

Telephone, Telegraph, petty office supplies.....	\$ 67.46
Postage.....	135.00
Printing Journal, extras, etc.....	3,227.87
Stenographic and Clerical Work.....	374.00
Reporting Annual Meeting.....	124.44
Councilors, Delegates and Com. Expense.....	445.12
Refund, County Secretaries.....	22.00
Secretary's Salary.....	866.65
Press Clipping.....	30.00
Treasurer's Bond.....	16.00
Auditing Books.....	10.00
Transfer to Medical Defense Fund.....	1,362.00
American Med. Association—Oklahoma Directories.....	13.00
Certificate of deposit, Commercial Nat. Bank.....	1,000.00

7,687.54

May 1, 1917, Balance on Hand.....	\$ 2,283.52
Certificate of Deposit, 4 per cent.....	2,000.00

TOTAL CASH RESOURCES, Medical Association.....\$ 4,283.52

**Medical Defense Fund.**

**Receipts.**

May 1, 1916, Balance Cash on Hand.....	\$ 1,466.00
Jan. 31, Oklahoma State Medical Assn.....	1,000.00
April 30, 1917, Oklahoma State Medical Assn.....	362.00

\$ 2,828.00

**Expenditures.**

July 31, 1916, Attorney's Fees.....	\$ 300.00
Jan. 31, 1917, Time Deposit, Com. Nat'l Bank, 4 per cent.....	2,000.00
April 11, 1917, Attorney's Fees.....	25.00

\$ 2,325.00

May 1, 1917, Balance Cash in Bank.....	\$ 503.00
Time Deposit, Commercial Nat'l Bank.....	\$ 2,000.00
TOTAL CASH RESOURCES, MAY 1, 1917.....	\$ 2,503.00
TOTAL RESOURCES ALL FUNDS (CASH).....	\$ 6,786.52

Respectfully submitted,

C. A. THOMPSON, Sec.-Treas.-Editor.

**Oklahoma County Society Report Introduced by the Committee.**

We, your committee appointed for the purpose of finding means whereby the burdens and responsibilities which we must assume in our National crisis may be equalized and the medical efficiency of our community be not too seriously impaired, beg leave to report as follows:

(1). We recommend that all physicians between the ages of 22 and 55 make formal application for service with the government; that these applications be turned over to the local committee of the Council of National Defense, who should select from these applications such as in their best judgment should be completed, returning the remainder to the applicants. If there be any between the ages of 22 and 55 who fail to apply, we recommend that the local committee ascertain all the information they can of the qualifications of such persons and forward same, with recommendations, to the Council of National Defense.



(2). We recommend War partnerships. Those physicians who are qualified and are willing to serve, should arrange with one or more who are to remain at home, on an equitable basis, a partnership whereby his interests, and the interests of his clientele will be safeguarded in his absence. This partnership may be on a percentage basis or an agreement whereby a monthly deposit of a definite sum may be made to the credit of the absent partner. Copies of all such agreements together with the monthly reports and monthly proceeds should be turned over to the secretary of this society, or to some one designated by this society, who will make deposits for the absentee and report to him as often as may be deemed advisable.

(3). The county society should have printed regular forms of announcements leaving blank spaces for names of contracting parties, and when a physician is called to service he should furnish a list of his clientele, to the county society, to whom these announcements are to be sent.

(4). For the guidance of those who are to remain at home we recommend: (a) When a new patient presents himself, the physician staying at home should ask the name of the doctor who last attended him. If this doctor is absent on service, and has left a locum tenens, an attempt should be made to induce the patient to go to the locum tenens, or War partner.

(b). If the last doctor who attended him is on military duty, it should be explained to the patient that attendance will willingly be given on behalf of that practitioner and on no other terms.

(c). Any attendance on behalf of such patients should be carefully and separately recorded and a list of such attendances should be regularly reported to the official of the County Society designated to receive such reports.

(d). Physicians remaining at home should endeavor to make charges in any given case in keeping with that which the absent physician charged for like services.

(e). Accounts rendered on behalf of an absentee should mention the absentee's name and the division of the proceeds should be in accordance with the agreement of partnership, in the hands of the county society official.

(f). New patients introduced by a patient of an absentee should be regarded as belonging to the absentee's practice.

(g). In cases of doubt—instances in which the patient frequently changes physicians, the absent physician should be accorded the benefit of the doubt.

(h). No patient attended on behalf of an absentee should be attended by his partner for at least one year after the absentee's return.

(i). The greatest discretion should be used as to the introduction of a partner or an assistant, or in commencing a new practice in an area from which men are absent on service.

In all cases of doubt as to what is the right course of action as regards an absentee, the practitioner should consider what he would like his neighbor to do if he were absent on military service.

The local committee on National Defense should be ready to advise always.

### Report of the Council.

We, the Council of the Oklahoma State Medical Society, wish to report that in our opinion it would be best that some of the monies now on deposit by this society be used for the purpose of defeating the referendum for which petitions are now being circulated by the chiropractics.

The amount of money necessary we cannot estimate at this time and it has been our opinion that it would be best that the council be asked at the time of expenditure of the money to appropriate a sufficient amount from the general fund.

We also wish to report that a committee of the council has audited the report of the Secretary-Treasurer and find it to be correct in every particular. The total

resources of the Society at this time are \$6,786.52, of which \$4,283.52 is in the general fund; \$2,503 is the total resources of the Medical Defense fund. Of this money \$4,000 is on time deposit drawing 4 per cent interest, leaving a balance available of \$2,786.52, which is subject to check. The report of the auditing committee is signed by Dr. Ellis Lamb and Dr. H. M. Williams.

The auditing committee and council wish to commend the Secretary-Treasurer upon the excellent financial condition of the society as it is largely through his efforts that this excellent cash balance is now available.

We, as the council, wish to recommend to you that you most heartily support the Journal of the State Association by contributing to the reading matter and as far as practicable trading with the firms advertising in our columns.

The Medical Defense Department is in excellent financial condition, and we feel sure is being handled to the satisfaction of all members contributing.

*Resolution.* We the committee wish to present the following resolution; that authority be given the Secretary-Treasurer to expend such money as the council may deem necessary for a defeat of the referendum of Senate Bill No. 111. This report is respectfully submitted by the Council through the President pro-tem, L. S. Willour.

Adopted by the House of Delegates.

### Proposition for Home Site

To the Oklahoma State Medical Association and the Members thereof:

On behalf of the Medicine Park Company, the owner of Medicine Park, I herewith submit the following proposition:

The Medicine Park Company tenders to your Association, and the members thereof, choice of any unsold site in Medicine Park, said site to embrace a lot or lots, or site, to be surveyed, said site to be conveyed to said Association, or to a corporation to be formed by members of said Association, by warranty deed, with abstract of title, said warranty deed to convey to said Association or corporation all the privileges granted property owners in said Medicine Park, said privileges being the free use to the stockholders of said association or corporation of all the waters in Medicine Park for the purpose of bathing, fishing, boating and hunting, perpetually.

The said proposition is hereby tendered on condition that said association or corporation will undertake to improve said site to be selected with a club house of permanent construction.

Respectfully submitted,

MEDICINE PARK COMPANY,

By J. Ehner Thomas,  
Manager.

### SEMINAL VESICLE INFECTIONS.

R. H. Herbst, Chicago (*Journal A. M. A.*, March 10, 1917), reports on cases of acute urethritis, the chronic course of which seemed to be due to infection of the seminal vesicles. His attention was first drawn to this idea by a patient under observation complaining of a persistent urethral discharge for six months, complicated by frequent and painful blood stained emissions which had not occurred prior to the urethral infection. He found the vesicles greatly enlarged and tender, and to relieve the condition he made a bilateral vasotomy and injected both vesicles with collargol. To his surprise, the profuse urethral discharge practically disappeared within forty-eight hours, and since that time he has made it a point to carefully examine the vesicles in all obstinate urethral discharges, and has come to the conclusion that they do not receive the attention they need. Five cases are reported in his paper illustrating the conditions and the results of treatment.

# JOURNAL OF THE OKLAHOMA STATE MEDICAL ASSOCIATION

VOLUME X

JUNE, 1917

NUMBER 6

PUBLISHED MONTHLY AT MUSKOGEE, OKLA., UNDER DIRECTION OF THE COUNCIL

DR. CLAUDE A. THOMPSON, EDITOR-IN-CHIEF

ENTERED AT THE POSTOFFICE AT MUSKOGEE, OKLAHOMA AS SECOND CLASS MAIL MATTER, JULY 28, 1912

THIS IS THE OFFICIAL JOURNAL OF THE OKLAHOMA STATE MEDICAL ASSOCIATION. ALL COMMUNICATIONS SHOULD BE ADDRESSED TO THE JOURNAL OF THE OKLAHOMA STATE MEDICAL ASSOCIATION, BARNES BUILDING, MUSKOGEE, OKLAHOMA.

The editorial department is not responsible for the opinions expressed in the original articles of contributors.

Reprints of original articles will be supplied at actual cost, provided request for them is attached to manuscript or made in sufficient time before publication.

Articles sent this Journal for publication and all those read at the annual meetings of the State Association are the sole property of this Journal. The Journal relies on each individual contributor's strict adherence to this well-known rule of medical journalism. In the event an article sent this Journal for publication is published before appearance in the Journal, the manuscript will be returned to the writer.

Failure to receive the Journal should call for immediate notification of the editor, 507 Barnes Building, Muskogee, Okla.

Local news of possible interest to the medical profession, notes on removals, changes in address, deaths and weddings will be gratefully received.

Advertising of articles, drugs or compounds not approved by the Council on Pharmacy of the A. M. A. will not be accepted.

Advertising rates will be supplied on application. It is suggested that wherever possible members of the State Association should patronize our advertisers in preference to others as a matter of fair reciprocity.

## EDITORIAL

### THE MEDICINE PARK MEETING.

The Medicine Park meeting resulted in the election of the following officers:

President	Dr. W. Albert Cook, Tulsa
President-elect, 1918-19	Dr. L. S. Willour, McAlester
1st Vice President	Dr. McLain Rogers, Clinton
2nd Vice President	Dr. Fowler Border, Mangum
3rd Vice President	Dr. Horace Reed, Oklahoma City
Secretary-Treasurer-Editor	Dr. C. A. Thompson, Muskogee

#### Councilors.

2nd District	Dr. Ellis Lamb, Clinton, term expires 1920
7th District	Dr. N. W. Mayginnis, Tulsa, term expires 1920
8th District	Dr. H. M. Williams, Wellston, term expires 1920
11th District	Dr. P. P. Nesbitt, Muskogee, term expires 1920
12th District	Dr. Ed. D. James, Haileyville, term expires 1920
13th District	Dr. J. L. Austin, Durant, term expires 1920
Delegate to the A. M. A. 1918-19,	Dr. Chas. R. Hume, Anadarko.

Meeting place, Tulsa, May 1918.

237 physicians registered for the meeting. All things considered, this attendance was splendid.

The meeting was a delightful surprise to the physicians attending. We may as well confess in advance that there was speculation as to the ability of the resort to care for the visiting physicians. However, all that has been satisfactorily settled to the very great credit of Medicine Park and the satisfaction of physicians attending.

Medicine Park is doubly beautiful on account of the unusual situation in which it is placed. Nestling among precipitous hills and gorges, which arise from



an otherwise monotonous territory, the very abrupt change in physical appearance charms the visitor and delights the eye. The Park contains the largest body of water in the State and lower down the valley are several other not inconsiderable bodies of impounded water. Mount Scott towers over all to the northwest, while to the southeast and south is the Ft. Sill Military and Artillery posts.

A move was inaugurated at the meeting to give sanction to the establishment of a doctors' home or club similar to that now owned by the Editor's Association. It should be understood in advance that this matter is purely optional with the individual physician who will in time be called on to subscribe to the matter if he wishes. There is no doubt that such an establishment will prove very popular with those physicians residing especially in central and western Oklahoma. Oklahoma City, Shawnee, Guthrie, Chickasha physicians and others from nearby cities will find the resort of convenient access by automobile; it is something entirely different from anything in their neighborhood, and the social and moral atmosphere is such that the physician's family will feel at home and be able to take without much effort an exhilarating and healthful vacation.

### THE QUESTION OF MEDICAL OFFICERS.

Dr. LeRoy Long, Dean of the Medical Department of the University, has been asked to forcefully call the attention of medical students to the matter below.

So necessary does the Council of National Defense deem it that an adequate, properly prepared medical officers service be trained and educated, that they think it may be necessary to ask the President to issue a special proclamation on the subject, calling attention to the fact that it is the patriotic duty of such students to remain under instruction until the country can avail itself of their trained service.

#### Notice to Medical and Pre-medical Students.

In the present national crisis a continuous supply of adequately trained medical officers is absolutely essential for the maintenance of armed forces in the field. It would be folly for the country to prepare for the immediate emergency alone—we must face the possibility of the war lasting for years. It is, therefore, the patriotic duty of all college students intending to study medicine to remain under instruction until the country can avail itself of their trained service.

Medical schools are in a sense "munition works" necessary to produce trained medical officers for the Army and Navy. All medical students must, therefore, in the interest of national safety continue their work until graduation. With the exception of such men as the Navy can utilize, all graduates are urged to secure a hospital training which the Surgeons-General of the Army and Navy consider essential for their arms of the Service.

Committee on Medical Schools  
Joseph Marshall Flint, Chairman  
Arthur Dean Bevan  
Thomas W. Huntington  
Edward Martin  
Charles H. Peck  
Winford Smith

Franklin Martin,  
Member of Advisory Commission  
Council of National Defense

F. F. Simpson,  
Chief of Medical Section  
Council of National Defense.

I am requested by the Council of National Defense to bring the above notice to attention of Pre-medical and Medical Students "in the most forceful manner possible."

LeRoy Long, Dean.

## CURRENT MEDICAL LITERATURE

Conducted by

DRS. CURT von WEDEL, Jr., and L. J. MOORMAN, Oklahoma City  
and FRED J. WILKEMEYER, Muskogee

## CANCER OF THE BREAST.

(Surgery, Gynecology and Obstetrics, May, by Willy Meyer.)

Meyer has written an excellent review of the subject of cancer, dwelling considerably on the history and especially the priority of his operation, and going over a period of over twenty years, he states that the most encouraging feature is the fact that the public have mostly gotten over the fear of surgical procedure, and rather promptly seek surgical advice in malignancy of the breast.

He divides cancer of the breast into two pre-eminent pathological pictures—the scirrhus and the medullary carcinoma. The scirrhus invades the normal tissue and destroys it by shrinkage, the nipple being retracted and elevated. It is hard and diffuse on palpation, and the tissue of the breast can be moved only with it. The axillary soon becomes infiltrated. Medullary carcinoma, on the other hand, increases the size of the mammary gland, diffusely invading the normal tissue. Its growth is more rapid, and the axillary glands are involved at an early stage of the disease.

Mammary carcinoma takes third place in frequency of all carcinomata.

As to the etiology, Meyer draws an interesting similarity between human carcinomata and vegetable cancer. He hopes that in some way we may be able to work out the etiology which he believes to be due to bacterial or parasitic origin. He hopes also that someone may follow on the line of work done by Dr. E. F. Smith of the U. S. Department of Agriculture, Bureau of Plant Industry. In this way there may be discovered a chemo-therapy or serum which may cure or dissolve all types of cancer.

Meyer goes rather deeply into the history of cancer of the breast. The first operation for extirpation of breast cancer, was done by von Volkmann in 1875. About twenty years later, in 1894, both Willy Meyer and Wm. T. Halsted of Baltimore, evolved what today is the classic operation for cancer—the difference being that the Halsted operation removes the malignancy from the sternum inward, while Meyer's operation removes the malignancy from the axilla outward. He goes rather extensively into the relative merits of the two operations—naturally being very much in favor of the operation which he devised.

He goes into detail describing the various skin incisions which are made in order to cover skin defects in removal of the breast, and giving the relative merits of the different ones. He recommends especially his own incision, the incision of Warren, Handley's extensive incision, and the one which I believe most of us follow in the West—that of Jackson. Handley removes the fascia covering the upper portion of the rectus and external oblique—the lymphatics in this portion of the fascia being rather early involved. Stuart, in 1915, devised a transverse incision which is rather difficult of procedure, but much to be recommended when cosmetic results are to be considered.

Meyer believes that we should always remove the pectoralis major and minor in toto, as it is in the fascia planes of these muscles that we have early lymphatic involvement. The one point which he lays especial emphasis upon, is the necessity of keeping away from the seat of disease—the work being done deep and entirely away. This procedure gives a smaller percentage of secondary involvements by not dislodging cancer cells. In the same way he believes that the removal of a portion of glands for diagnostic purposes should not be done, as it is far better surgery to do a radical from the beginning. As to supra-clavicular glands, he believes it is best to remove these glands when there is extensive invasion of the upper quadrants of the breast.

Prolonged X-ray treatment should follow every operation, as it does prevent metastasis, and especially should attention be paid to raying the spinal column and femur, as there are places of predilection for bone metastasis.

As regards statistics, he almost feels inclined not to give any as there is no real value in personal statistics. Many persons afflicted with cancer of the breast can be cured by radical operation, while others may be followed by rapid local and regional recurrence. This recurrence is determined upon by the degree of virulence, the duration of the disease, and whether the diseased area was entered during the operation. He states that of 80 patients, 35 per cent are alive and well; 39.5 per cent remained free from recurrence for 3 to 12 years; 30 per cent from 5 to 12 1-2 years.

In conclusion he states that the radical operation for carcinoma of the breast, as practiced today, offers a fair prospect for permanent cure, provided the tumor is operated on at an early stage and has not involved the group of regional lymphatic glands.

C. von Wedel, Jr.

## PERSONAL AND GENERAL NEWS

**Dr. Walter Penquite** of Chickasha is seriously ill.

**Dr. O. C. Coppedge**, Bristow, lost his Ford car by theft recently.

**Dr. Earnest Sullivan**, Pauls Valley, is in New York visiting the clinics.

**Dr. J. C. Matheney**, Lindsay, has returned from New Orleans Polyclinic.

**Dr. J. H. Gaines**, Warner, has been appointed Court Clerk of Muskogee County.

**Dr. N. H. Lindsey**, Pauls Valley, is visiting in Chicago and while away will also attend the Mayo Clinics.

**Dr. J. R. Preston**, Weleetka, recently underwent an operation for appendicitis in the Henryetta hospital.

**Dr. R. E. Looney**, Oklahoma City, is visiting in Tennessee. Before returning, he will attend the New York clinics.

**Cherokee physicians** will establish a hospital if the plans of Drs. Smith, Lancaster, Growden, Clark and Hibbard, materialize.

**Dr. G. S. Baxter**, Shawnee, has been appointed Division Surgeon of the Rock Island road, vice Dr. Chas. Blickensderfer, who was killed, April 9th.

**Drs. Longmire, Schwab, Harris and Hoover**, Sapulpa, constitute a committee to teach classes in First Aid work under the auspices of the local chapter of the Red Cross.

**The Texas State Medical Association**, conforming to the wishes of the Oklahoma State Medical Association, have changed the date of their annual meeting to May 14-15-16, 1918, in San Antonio.

**Dr. Will Patton Fite**, Muskogee, has been ordered to report for duty with the Oklahoma National Guard at Ft. Sill. Dr. Fite cut short his attendance as Assistant Surgeon in the polyclinic in order to prepare to take his post.

**Dr. Walter E. Wright Laboratory**, Tulsa, have just issued an artistic and instructing volume entitled "Stereoroentgenograms," which exemplifies the high-class work and its broad variety being done by this modern institution. Copies will be sent gratis on request.

**Dr. G. E. Hartshorne**, Shawnee, has resigned his position with the Rock Island and retired from practice. He will go to his farm near Spiro. Dr. Hartshorne has been practicing medicine in Indian Territory and Oklahoma for 28 years.

**Drs. Fowler Border**, T. J. Horsley, Mangum, and B. J. Enfield, Hobart, narrowly escaped death when a car driven by Dr. Horsley was overturned near Hobart. It is said that Dr. Enfield was the most seriously injured, receiving a fracture of the femur.

**Dr. George H. Moody**, San Antonio, Texas, died April 29th in that city. Dr. Moody was one of the well known and highly efficient neurologists of Texas and numbered many warm friends in the Oklahoma profession. His death at 44 is a distinct loss to the southwestern profession.

**Three ice refrigerating and cold storage companies** of Enid, advertise that they will continue this summer their past practice of furnishing free ice to families having sickness and small children who are unable to purchase such supplies. They will also honor all orders from the local Red Cross.

**Dr. C. G. Martin**, Bristow, had an exciting experience recently when he was awakened by the attempt of some thieves to steal his machine. He fired on the men, they returned the fire, their bullet shattering a mirror behind his head. The thieves made their escape but the doctor retained the car.

**The Oklahoma Hospital**, Tulsa, occupies four pages with illustrations in the May issue of *The Modern Hospital*, from the pen of Dr. Fred S. Clinton, President. The article, descriptive of the institution and its aims, clearly describes the surroundings and is characteristic of the enterprise of Dr. Clinton.

**Dr. M. V. Reynolds**, Bristow, died in that city from heart failure, April 22. Dr. Reynolds was the father of Lieutenant E. W. Reynolds of the Tulsa Ambulance Corps. He was 60 years old and had resided in Bristow for 12 years. At the time of his death he was Health Officer for Creek county. He is survived by a wife and two children.

## MISCELLANEOUS

## PURE WATER FOR SMALL TOWNS.

(From State Board of Health)

The problem of a pure water supply for small towns and cities is a most important one from the viewpoint of public health, but it is not as complicated and difficult one as it was a few years ago. The advance in chemical and mechanical agents for the purification of water has been so great that by the observance of proper precautions it is possible for nearly every community to have a supply which is safe and drinkable. Nor is the expense involved in observing these precautions heavy, in fact, considering the results to be obtained it is surprisingly light and within the reach of every community, no matter how small.



The essential factors for the purification of water for drinking purposes are chlorination and filtration. Each is essential. The filtration clears and purifies the water and eliminates turbidity. Filtration, however, cannot be depended upon to kill disease producing germs. This is the province of chlorination.

For filtration, especially in the case of small cities and towns, the method of sand filtration has been found practical and comparatively inexpensive. In addition to the direct filtration a chemical coagulant, consisting of lime and iron sulphate is employed. The iron sulphate with the lime tends to form a coagulant which rapidly aids in clearing the water. The water is thus made clear and pleasant to the eye and taste. This phase of the treatment through settlement and filtration reduces the number of bacteria. It is not, however, in itself sufficient. It should be used in connection with the chlorination treatment.

The chlorination treatment consists briefly in mixing a very small quantity of chloride of lime with the water. A solution of chloride of lime and water is first mixed in a tank or other vessel. This solution is then permitted to run or drip from the tank or vessel into the main or conduit carrying the water supply. Chloride of lime costs but little and the apparatus required for the treatment of the water is inexpensive. The running expense is small, requiring only a small part of a man's time. The quantity of chlorine mixture is minute, about one part to 1,000,000 parts of water and does not affect either the taste or smell of the water. The chlorination treatment acts rapidly and effectively on germs, especially disease producing germs, killing practically all of them. In a number of tests made at the Oklahoma state laboratory it was found that water unfit to drink before chlorination was perfectly safe after this treatment. In fact it is a conservative statement that through the use of filtration and chlorination an absolutely safe water supply can be guaranteed.

So excellent have been the results and so simple and easy the treatment of water by the chlorination method that it is now employed by many cities whose water supply might be supposed naturally pure. New York City spent over \$200,000,000 to obtain a pure water supply from far up in the Catskill Mountain district, yet as an additional precaution all the water used is now given the chlorine treatment, with the result that there has been a marked decrease in the number of cases of typhoid traceable to water. A number of other cities have had the same experience. No price is too high to pay for good health, no single factor has greater effect on the health of the community than its water. It is possible to assure a pure water supply at small cost and trouble. An increasing number of communities are using the filtration-chlorination method described. The more its advantages are understood the more insistent will be the public demand for its general adoption.

#### PREVENTION OF MALARIA.

To prevent malaria four methods are more or less effectual:

- 1st. By getting rid of the *Anopheles* mosquitoes.
- 2nd. By keeping these mosquitoes away from well persons so they cannot bite them.
- 3rd. By giving quinine to persons suffering from malaria, so that even if mosquitoes bite such persons the mosquitoes will be poisoned by the quinine and not transmit the infection.
- 4th. By protecting well persons so that even if bitten by mosquitoes which carry the microbes of malaria they will not develop the disease. This can generally be accomplished by quinine in small doses.

The most effectual method of getting rid of the *Anopheles* mosquitoes is by preventing them from breeding. This may best be accomplished by draining the swamps and other places where stagnant water can accumulate. This of course requires community action and is apt to be expensive. Where it is not possible much may be accomplished by the use of oil, by draining stagnant pools and not permitting water to stand, by clearing the edges of streams and pools from weeds which shelter the larvae and by introducing gold fish and other small fish which destroy the larvae.

The best way to prevent malaria mosquitoes from getting at well persons is to have houses carefully screened. Persons should also be careful about going out at night in districts where this mosquito is prevalent.

In communities where malaria is common, well persons can protect themselves by quinine taken in light doses. Four or five grains a day is ordinarily enough. Children may be given about one-half that dose, with even less for little children.

#### DIRECTIONS FOR MAKING BLOOD SMEARS FOR MALARIAL EXAMINATION AND DIFFERENTIAL BLOOD COUNTS.

1. If malarial examination is wanted, specimens should be taken, if possible, shortly before a chill, but never within less than ten hours after one. In typical cases, take at time of lowest daily temperature.
2. Specimens should be taken before quinine is administered.
3. The slides must be perfectly clean and free from fat. Thorough washing with soap and water and rubbing with alcohol will usually suffice.
4. Cleanse the lobe of the ear (or finger) with alcohol.
5. Work must be done quickly before coagulation begins.

6. Prick the skin deeply to ensure a free escape of blood and discard the first drop or two. Allow a small drop to flow on a slide near one end. A second slide is held at an angle of 45 degrees to the first one and touching the drop of blood. Allow the blood to spread out by capillary attraction along the edge of the second slide. Then quickly draw the blood along the first slide with a clean sweep, exerting little pressure. Dry in air.

7. In sending blood smears to the laboratory three slides are desired. For malarial examination one smear should be thicker than the others.

8. Protect well in a wooden or tin box and send by mail to the State Board of Health, Guthrie, Oklahoma.

9. Slides will be sent upon request.

### THE WHOLESOMENESS OF GELATINE.

#### Popular Dessert Dish is not only Palatable but also a Health Aid.

Gelatine is distinctly a modern food. In our grandmother's day the preparation of a gelatine dessert was a task requiring such a degree of skill, patience and effort that it was not frequently attempted. But today, when the many brands of commercial gelatine make its use simple and convenient so that it has become an every-day article of diet—the question of its dietetic value becomes of interest.

Gelatine is a wholesome article of diet because of a rather peculiar property. While it is not, as some suppose, a good substitute for albumen or protein foods, it has the faculty of saving albumen in the body from destruction. It dissolves more easily than albumen and acts as a guard between albumen and the body fluids which would destroy it. It thus saves albumen to the body, which is equivalent to supplying new albumen.

In addition to this indirect nutritive value, gelatine provides a most valuable means for conveying other kinds of nourishment in an appetizing and easily digested form. This is well illustrated in the case of persons who cannot assimilate ordinary milk readily, but the moment gelatine is added find it easily digestible. Gelatine is used today in many ways not ordinarily supposed. It is used in French soups, in the preparation of cold bouillon and consomme, in jellies, jams, candy, ice cream—as well as the well known dessert preparations. It is also used extensively in many dishes for the sick and convalescing. In every case the use of gelatine may be said to increase the value of the dish.

In the jelly powders of commerce an incidental pure food problem arises in the matter of flavoring materials. The fruit flavorings that are mixed in powdered form with the powder are sometimes not made from the actual fruit juices, but are synthetic and subject to some of the criticisms that have been made of synthetic flavoring used at soda fountains.

Probably the only manufacturer who has entirely overcome the flavoring difficulties is Mr. Otis E. Gildden, for 17 years the leading expert in gelatine desserts, and now general manager of the Waukesha Pure Food Company, makers of the new Jiffy-Jell. He has put all his years of experience into this dessert and in addition to guaranteeing an ultra-superior grade of gelatine made by special processes in what is termed the model kitchen of the world, actual fruit flavors are furnished in liquid form, small glass vials of concentrated fruit juices being enclosed in the packets of gelatine. In the few months it has been on the market Jiffy-Jell is leading all older gelatines in sales.

The new plan has made possible the use of the finest fruits in obtaining fruit essences and has enabled the company to include in its list of flavorings, pineapple, which has never been properly made in powder form. The company also offers a hitherto novel gelatine flavor in mint, which is proving highly popular for serving as a garnish or relish with meats and other entrees, or in making salads.

Gelatine with these actual fruit and mint flavors especially recommends itself for desserts, salads and garnishes for early spring, when fresh fruits and herbs are scarce, not always fresh, and high-priced.

### A REAL "REST" VACATION.

Doctor, some of your patients will be needing a vacation soon—a change of scene, restful diversion and a taste of the outdoor life.

Such patients are cordially invited to Battle Creek where everything is scientifically planned for rest, recreation and health-building—where the patient eats, sleeps and lives in a wholesome and "biologic" way.

The bill of fare at Pattle Creek is simple, delicious and appetizing. A corps of twenty trained dietitians are always at hand in the dining halls to assist the patient in selecting foods best adapted to his individual needs.

Ample facilities for the outdoor life encourage health-building diversions. Graduated exercises meet the particular needs of the more feeble patients.

If needed, a complete physical examination and treatment are available through the most scientific equipment. Forty specializing physicians, three hundred highly efficient nurses, nearly a hundred trained bath attendants and an able corps of physical directors are at the service of vacationists.

Literature descriptive of the vacation advantages of Battle Creek will be sent free to any physician upon request.

THE BATTLE CREEK SANITARIUM, Box 198, Battle Creek, Michigan.

## AFLOAT AND ASHORE.

Two new products which are attracting unusual attention, both in this country and abroad, are CHLORAZENE (Abbott), Dakin's New Antiseptic, and PARRESINE (Abbott) the improved, hot-wax dressing for burns. Both of these remedial agents have been passed by the Council of Pharmacy and Chemistry of the American Medical Association, to appear in their "New and Non-Official Remedies," and have been ordered by the United States Navy to be placed in every ship.

The results which are reported by surgeons and hospitals in the use of CHLORAZENE and PARRESINE are so remarkable that it would surely pay every physician to become better acquainted with these products.

Literature will be sent on request to The Abbott Laboratories, Chicago, Illinois.

## COUNCIL ON PHARMACY AND CHEMISTRY.

(Abridged Report)

During April, among others, the following articles were accepted by the Council on Pharmacy and Chemistry for inclusion with New and Non-official Remedies:

**Abbott Laboratories:** Parresine.

**E. R. Squibb and Sons:** Acetylsalicylic Acid, Squibb.

## NEW AND NON-OFFICIAL REMEDIES.

**Ferric Cacodylate: Iron Cacodylate.**—A ferric salt of cacodylic acid containing from 39.7 to 44.9 per cent arsenic (As). A grayish-brown powder, soluble in water. The use of ferric cacodylate has been proposed in cases where the effects of iron salts and the mild arsenic effect of cacodylates is desired. Dosage: From 0.015 to 0.1 gm.

**Ampules Iron Cacodylate-Mulford, 0.03 gm.**—Each ampule contains ferric cacodylate 0.03 gm. in 1 cc. solution. The H. K. Mulford Co., Philadelphia.

**Ampoules Iron Cacodylate-Squibb, 0.03 gm.**—Each ampule contains ferric cacodylate 0.03 gm. in 1 cc. solution. E. R. Squibb and Sons, New York City (*Journal A. M. A.*, April 7, 1917, p. 1043).

**Acetylsalicylic Acid-Squibb.**—A non-proprietary brand of acetylsalicylic acid complying with the standards of New and Non-official Remedies. E. R. Squibb and Sons, New York City.

**Aspirin, L. and F.**—A non-proprietary brand of acetylsalicylic acid complying with the standards of New and Non-official Remedies. Lehn & Fink, New York City (*Journal A. M. A.*, April 28, 1917, p. 1261).

## PROPAGANDA FOR REFORM.

**Piperazin and Other Organic Urate Solvents.**—From a review of the literature P. J. Hanzlik concludes: there is no reliable evidence to show that piperazin, in small or therapeutic doses, imparts to urine urate solvent qualities, either by direct addition or after excretion; excessive doses produce a slight but negligible increase in uric acid excretion, the same being effectively produced by sodium bicarbonate or sodium citrate; there is no reliable evidence to indicate that piperazin can remove or prevent urate deposits; diuresis is uninfluenced by even large doses of piperazin and its administration does not materially reduce the acidity of the urine; scientific evidence, though limited, and clinical opinion indicates that piperazin is valueless in gout. Hanzlik also reports that there is sufficient evidence to indicate the worthlessness of the following as urate solvents: quinic acid, quinoline, colchicum, piperidin, Urosin, Lycetol, Sidonal, Lysidin and Urol (*Journal Lab. and Clin. Med.*, Feb. 1917, p. 308).

**Ambrine.**—Ambrine is a French, secret preparation that has been on the market for many years. It has recently come into prominence through sensational articles in the lay press. For all practical purposes it is solid paraffin to which some material has been added to make it adhesive and more plastic. For use it is heated until liquid and then applied to open wounds and burns, forming a relatively impervious dressing (*Journal A. M. A.*, April 7, 1917, p. 1057).

**Paraffin Films.**—The popular propaganda for "Ambrine" having brought the paraffin film treatment of burns into prominence, Torald Sollmann has instituted experiments to devise a suitable, open formula preparation which is simple and yet meets all requirements. He suggests that surgeons who desire to experiment with the paraffin treatment of burns use simple preparations of known composition. Ordinary paraffin melting at about 50 C. (122 F.) appears to possess practically the mechanical properties of "Ambrine." A mixture containing some asphaltum (asphalt varnish, Trinidad or Bermudez, "asphalt cement" and Texas asphalt were tried) gives a preparation of superior pliability. Other formulas are given and their trial suggested (*Journal A. M. A.*, April 7, 1917, p. 1037).

**Corpora Lutea (Soluble Extract).**—The Council on Pharmacy and Chemistry reports that "Corpora Lutea (Soluble Extract)" marketed by Parke, Davis and Co., in the form of ampules for hypodermic administration is ineligible for admission to New and Non-official Remedies, because it is a secret preparation advertised under extravagant claims. No statement of composition is made beyond the indefinite claim that it is an aqueous solution of "soluble Corpora Lutea Extract," each ampule corresponding to 0.2 gm. desiccated gland. How these soluble products are obtained, whether they represent all the water-soluble principles, or whether some have been eliminated is not stated. The claims made for the action and uses of the preparation do not make clear the essentially experimental



status of the article and are therefore misleading. Further, the use of this extract is advised not only in functional amenorrhea and the ordinary reflex consequences of physiologic or artificial menopause, but also in conditions where the expectation of benefit cannot possibly be fulfilled (*Journal A. M. A.*, April 7, 1917, p. 1056).

**Pharmacology of Stovaine.**—M. I. Smith and R. A. Hatcher find that in toxic doses stovaine produces death in animals by inducing immediate and simultaneous paralysis of the heart and the respiration, the action on each being independent of the other. They find that stovaine disappears rapidly from the blood stream after its intravenous injection. Stovaine is slightly more toxic than novocaine by similar modes of administration and complete recovery does not follow the administration of toxic doses of stovaine so promptly as it does with corresponding doses of novocaine (*Journal Pharm. and Exp. Ther.*, January 1917, p. 231).

**Hexamethylenamin in Pyelitis.**—I. A. Abt advises caution in the administration of hexamethylenamin in the pyelitis of infants. It should be under continuous observation and its use should be continued for an extended period. The urine should be frequently examined for blood. Abt has more than once seen cases of fatal nephritis which he believes due to the overuse of hexamethylenamin. He advises that, if given to infants under one year of age, it should be given in one grain doses followed by water. This dose may be repeated four or five times daily (*Journal A. M. A.*, April 14, 1917, p. 1100).

**The Luetin Test.**—Confirmatory of previous investigations, H. N. Cole and H. V. Parysek find that some non-syphilitics respond positively to the luetin test and that in those non-syphilitics who do not respond spontaneously the reaction can generally be provoked by iodides. They also demonstrated that the reaction may be provoked by potassium nitrate and potassium bromide. Proving that the potassium ion in the potassium iodide and bromide was not concerned in the reaction, they found that the luetin test may be provoked by sodium bromide, sodium iodide and calcium bromide (*Journal A. M. A.*, April 14, 1917, p. 1089).

**Abolition of the Salvarsan Patent.**—The Chicago Medical Society and the St. Louis Medical Society urge the abolition of the Salvarsan patent. The patent should be abrogated, not only because the patentees have not supplied the demand, not alone because they have dictated to the Medical profession, who should have the drug and how much a physician might have, not alone because of the war with Germany, not alone because of the special needs of the government at this time for the control of venereal diseases, not alone because, as some claim, the patent at Washington does not correctly describe the product, but also because the people who are supplying this product are charging prices that are exorbitant. In order that a sufficient supply to control the ravages of one of the most serious diseases that afflict humanity, may be assured, it is the duty of Congress to abrogate the Salvarsan patent (*Journal A. M. A.*, April 21, 1917, p. 1187 and 1203).

**Citric Acid and Citrates.**—Citric acid and the alkali citrates, potassium citrate and sodium citrate, are oxidized in the body with formation of carbonates and hence tend to increase the alkalinity of the blood. Citric acid and the alkali citrates tend to render the urine less acid and, in large doses, render it alkaline (*Journal A. M. A.*, April 21, 1917, p. 1206).

**Pepsodent.**—Wm. J. Gies writes that Pepsodent is a dentifrice widely advertised as a mucin digestant. In a research conducted for the First District Dental Society of the State of New York, Professor Gies and Miss Franke found that the digestive claims were not warranted in any degree. Gies holds that there is about as much common sense in the proposed use of Pepsodent for this purpose as there is in the oral administration of a few grains of Lactopeptine to improve impaired tryptic digestion in the intestines (*Journal A. M. A.*, April 28, 1917, p. 1278).

## NEW BOOKS

### TEXT BOOK OF SURGICAL OPERATIONS

Illustrated by Clinical Observations, for Physicians and Students, by Prof. Fedor Krause, Privy Medical Councillor, Directing Physician Augusta Hospital, Berlin, in association with Emil Heymann, M. D., Chief Physician, Augusta Hospital. Translated into English and Edited for American Readers by Albert Ehrenfried, A. B., M. D., F. A. C. S., First Assistant Visiting Surgeon, Boston City Hospital; Junior Assistant Surgeon, Children's Hospital; Surgeon, Boston Consumptive's Hospital. (In Six Volumes) Volume 2, with 373 illustrations in two or more colors, Price \$7.00. Linen, 715 pages, New York, 1917, The Reblman Company.

This beautiful work is certainly the *Ultima Thule* of mechanical excellence and artistic merit. One is immediately fascinated by the clear, beautiful, colorful cuts, by their great variety and close enunciation of the text accompanying.

The book is divided into Surgical Procedures in the Upper and Lower Jaw; Surgical Affections of the Oral Cavity; Procedures on the Pharynx; Procedures on and Injuries of the Salivary Glands; Surgery of the Facial and Cervical Nerves; Surgery of the Brain; Surgical Treatment of Epilepsy; Surgery of Brain Tumors; and the Operative Treatment of Brain Abscess, Purulent Meningitis, Cranial Tuberculosis and Brain Injuries; Closure of Defects in the Skull, Plastic Restoration of the Dura, Encephalocele and Pericranial Sinus.

The consideration of etiology and symptoms from the clinical standpoint is most entertainingly written; there is certainly not an uninteresting page in the volume. It is to be sincerely commended to the student and surgeon.

#### TRAUMATIC SURGERY

By John J. Moorhead, M. D., F. A. C. S. Adjunct Professor of Surgery in the New York Post-Graduate School and Hospital. Octavo volume of 760 pages with 522 original illustrations. Philadelphia and London: W. B. Saunders Company, 1917. Cloth \$6.50 net, Half Morocco \$8.00 Net.

While one phase of the Army Surgeon's activities is perhaps as important as another in the final analysis, the emergency must be met when it occurs and mishandling of wounds or the emergencies met with in large bodies of people reflect more glaringly than others on the attendant and have more permanently injurious effect on the individual possibly than if he were neglected in the matter of sanitation or illness for a time.

The author has endeavored to give his ideas based on a large surgical practice of the proper handling of wounds and their complications; he holds, and rightly so, that a proper initial treatment of Potts fracture or infection of the hand is a greater manifestation of the surgical art than removal of an "interval appendix". Much attention is given the little, yet so often, important things met in daily work; the opening of a simple bleb is illustrated in order to show how not to do it. Fractures of special variety are given much space. In view of the importance of diagnosis and prognosis due to Workmen's Compensation Laws chapters are included on Injuries due to Electricity, Compressed Air, and from Illuminating Gas. Those due to Submersion, Suffocation, and Smoke Inhalation are considered. These are not usually found in even the late surgical works. Injury in relation to Abortion, Appendicitis, Visceral Prolapse; The "Traumatic Neuroses", Eye and Ear Test Standards, X-ray and X-ray Burns, Medicolegal Phases, including examination and reports are largely considered. The importance of this to the "emergency surgeon" is at once apparent. We most prayerfully commend to a certain class of "expert" witness surgeons the statement, "Trauma is the rarest of all causes and no single or isolated act of ordinary violence has ever produced a fully formed hernia".

The work is noticeable for its minute handling of the many small things confronting the practitioner daily. Its up-to-dateness is attested by allusion to Dakin's solution and similar late innovations of the war.

#### ABNORMALITIES OF MYOCARDIAL FUNCTION

The Diagnosis and Treatment, With Special Reference to the Use of Graphic Methods, by T. Stuart Hart, A. M., M. D., Assistant Professor Clinical Medicine in the College of Physicians and Surgeons, Columbia University. Visiting Physician to the Presbyterian Hospital in the City of New York. Illustrated with 248 engravings, 240 of which are original. Cloth 320 pages, Price \$4.50 The Rebman Company, New York. 1917.

This is a clinical discussion of the abnormal heart graphically and copiously illustrated, the volume teeming with electrocardiograms. It considers especially the late and newer methods of diagnosis and interpretation of heart function.

The arrhythmias, effects of digitalis and atropine are graphically illustrated, the uses of digitalis is especially and rather exhaustively treated.

#### INTERNATIONAL CLINICS, VOLUME IV, TWENTY-SIXTH SERIES.

Edited by H. R. M. Landis, M. D., and other eminent authors. Cloth. Illustrated, 307 pages, price \$2.00, 1916, J. B. Lippincott Company, Philadelphia and London.

Granular Ulceration of the Genitalia, by Henry Tucker, Philadelphia, is an illustrated article portraying a rare condition likely to be confused with (a) Syphilis—antisyphilitic treatment has no influence on the lesion; (b) Malignant Ulcer—pain is marked, if improperly treated, fatal termination results, may be diagnosed by laboratory findings; (c) Tuberculosis cutis—differential diagnosis difficult, but ulceration likely to be more deep seated, finding of tubercle bacilli in cut section, etc. The causative factor is not known; indications pointing to staphylococcal infection. X-ray treatment seems to be most efficacious.

Acute Syphilitic Meningitis by Boris Bronstein, Odessa, Russia; Diverticulum of the Urinary Bladder, by William E. Lower, Cleveland; General Considerations on the Treatment of Wounds and Aneurysms of the Axillary Artery by M. G. Aivrand, Dijon, France, are only a few of the highly interesting contributions indexing the wide field covered.

#### AT THE BAR OF PUBLIC OPINION.

A little booklet of twenty-eight pages issued by the American Medical Association with the following foreword: "This is a collection of quoted opinions from newspapers and magazines on the subjects of the nostrum evil and quackery. The criticisms, coming from sources which might be financially benefitted if they kept silent, are of particular interest."

These extracts prepared by the Propaganda Department of the A. M. A. are the opinions of many leading editorial writers and observers in this country on what most physicians know to be one of the real menaces to our people. They are inspiring and informing as to conditions all over the country; every physician should take a moment to send for the little work, post himself and be more than ready to discuss the matter intelligently with his clientele, who will in turn gradually spread the truth where it will do good. Price 10 cents. The American Medical Association, Chicago.

































## OFFICERS OF COUNTY SOCIETIES

County	President	Secretary
Adair	J. Patton, Stilwell	A. J. Sands, Watts
Alfalfa	S. B. Growden, Cherokee	L. T. Lancaster, Cherokee
Atoka		
Beaver		
Beckham	J. F. Yarbrough, Erick	K. R. Rone, Elk City
Blaine	M. W. Buchanan, Watonga	J. A. Norris, Okeene
Bryan	J. H. Shuler, Durant	D. Armstrong, Mead
Caddo	W. T. Hawn, Binger	C. R. Hume, Anadarko
Canadian	P. F. Herod, El Reno	W. J. Muzzy, El Reno
Cherokee	V. L. McPherson, Boswell	E. R. Askew, Hugo
Carter	J. C. Best, Ardmore	R. H. Henry, Ardmore
Cleveland	J. M. Williams, Norman	Gayfree Ellison, Norman
Cherokee	W. B. Blake, Tahlequah	C. A. Peterson, Tahlequah
Custer	M. C. Comer, Clinton	S. C. Davis, Clinton
Comanche	L. A. Milne, Lawton	G. Pinnell, Lawton
Coal	J. B. Clark, Coalgate	A. Cates, Tupelo
Cotton	M. T. Clark, Walters	G. O. Webb, Temple
Craig	C. S. Neer, Vinita	W. R. Marks, Vinita
Creek	C. D. Blachley, Drumright	H. S. Garland, Sapulpa
Dewey		
Ellis		
Garfield	W. L. Kendall, Enid	James H. Hays, Enid
Garvin	G. L. Johnson, Pauls Valley	N. H. Lindsey, Pauls Valley
Grady	E. E. Dawson, Chickasha	Martha Bledsoe, Chickasha
Grant		C. H. Lockwood, Medford
Greer	E. M. Poer, Mangum	T. J. Horsley, Mangum
Harmon		J. B. Hollis, Hollis
Haskell	M. VanMatre, Keota	J. R. Waltrip, Kinta
Hughes		
Jackson	D. C. Buck, Eldorado	W. H. Rutland, Altus
Jefferson	G. C. Wilton, Ryan	J. I. Derr, Waurika
Johnson	C. B. Ballard, Mannsville	H. B. Kniseley, Tishomingo
Kay		A. S. Risser, Blackwell
Kingfisher	C. E. Wagoner, Hennessey	Chas. W. Fisk, Kingfisher
Kiowa	Wm. McIlwain, Lonewolf	A. L. Wagoner, Hobart
Latimer		E. B. Hamilton, Wilburton
Le Flore	J. B. Beckett, Spiro	G. A. Morrison, Poteau
Lincoln		A. M. Marshall, Chandler
Logan	A. A. West, Guthrie	E. O. Barker, Guthrie
Love		
Mayes	J. E. Hollingsworth, Strang	W. C. Bryant, Choteau
Major		
Marshall	A. E. Ballard, Madill	O. E. Wellborn, Kingston
McClain	J. W. West, Purcell	O. O. Dawson, Wayne
McCurtain	A. S. Graydon, Idabel	C. R. McDonald, Broken Bow
McIntosh	N. P. Lee, Checotah	Wm. A. Tolleson, Eufaula
Murray	J. A. Adams, Sulphur	W. H. Powell, Sulphur
Muskogee	I. B. Oldham, Muskogee	J. G. Noble, Muskogee
Noble	Bruce Watson, Perry	T. F. Renfrow, Billings
Nowata	J. E. Brookshire, Nowata	J. R. Collins, Nowata
Okfuskee	H. A. May, Okemah	J. M. Peuberton, Paden
Oklahoma	L. J. Moorman, Oklahoma City	F. B. Sorgatz, Oklahoma City
Okmulgee	N. N. Simpson, Henryetta	H. E. Breese, Henryetta
Ottawa	R. F. Von Cannon, Miami	G. P. McNaughton, Miami
Osage	J. M. Ennis, Pawhuska	Benj. Skinner, Pawhuska
Pawnee		E. T. Robinson, Pawnee
Payne	E. M. Harris, Cushing	J. B. Murphy, Stillwater
Pittsburg	J. O. Grubbs, McAlester	J. C. Johnston, McAlester
Pottawatomie	J. H. Scott, Shawnee	G. S. Baxter, Shawnee
Pontotoc	C. E. Orr, Ada	M. L. Lewis, Ada
Pushmataha		
Rogers	W. E. Smith, Collinsville	W. A. Howard, Chelsea
Roger Mills	W. S. Wimberly, Haunton	Lee Dorrall, Hummon
Seminole		W. L. Knight, Wewoka
Sequoyah	S. B. Jones, Sallisaw	T. F. Wood, Sallisaw
Stephens	E. B. Thomason, Velma	J. M. Nieweg, Duncan
Texas	W. H. Langston, Guymon	R. B. Hays, Guymon
Tulsa	A. W. Roth, Tulsa	W. Forest Dutton, Tulsa
Tillman	A. J. Hays, Frederick	J. E. Arrington, Frederick
Wagoner	F. W. Smith, Wagoner	J. L. Reich, Wagoner
Washita	D. W. Bennett, Sentinel	A. S. Neal, Cordell
Washington	W. E. Rammel, Bartlesville	J. G. Smith, Bartlesville
Woodward	Ralph Workman, Woodward	C. W. Tedrowe, Woodward
Woods	Isaac Hunt, Freedom	D. B. Ensor, Hopeton



## OFFICERS OF OKLAHOMA STATE MEDICAL ASSOCIATION.

Meeting Place—Tulsa, May, 1918.

President, 1917-18—Dr. W. Albert Cook, Tulsa.

President-elect, 1918-19—Dr. L. S. Willour, McAlester.

1st Vice-President—Dr. McLain Rogers, Clinton.

2nd Vice-President—Dr. G. F. Border, Mangum.

3rd Vice-President—Dr. Horace Reed, Oklahoma City.

Secretary-Treasurer-Editor—Dr. C. A. Thompson, Muskogee.

Delegate to the A. M. A., 1918-19—Dr. Chas. R. Hume, Anadarko.

Delegate to the A. M. A. 1917-18—Dr. M. A. Kelso, Enid.

## COUNCILOR DISTRICTS.

1. Cimarron, Texas, Beaver, Harper, Ellis, Woods and Woodward; Councilor, Dr. J. M. Workman, Woodward. Term expires 1919.
2. Roger Mills, Beckham, Dewey, Custer, Washita and Woodward; Councilor, Dr. Ellis Lamb, Clinton. Term expires 1920.
3. Harmon, Greer, Jackson, Kiowa, Tillman, Comanche and Cotton; Councilor, Dr. G. P. Cherry, Mangum. Term expires 1918.
4. Major, Alfalfa, Grant, Garfield, Noble and Kay; Councilor, Dr. G. A. Boyle, Enid. Term expires 1919.
5. Kingfisher, Canadian, Oklahoma and Logan; Councilor, Dr. Fred Y. Cronk, Guthrie. Term expires 1918.
6. Caddo, Grady, McClain, Garvin, Stephens and Jefferson; Councilor, Dr. C. M. Maupin, Waurika. Term expires 1919.
7. Osage, Pawnee, Creek, Okfuskee, Okmulgee and Tulsa; Councilor, Dr. N. W. Mayginnnes, Tulsa. Term expires 1920.
8. Payne, Lincoln, Cleveland, Pottawatomie and Seminole; Councilor, Dr. H. M. Williams, Wellston. Term expires 1920.
9. Pontotoc, Murray, Carter, Love, Marshall, Johnston and Coal; Councilor, Dr. J. T. Slover, Sulphur. Term expires 1918.
10. Washington, Nowata, Rogers, Craig, Ottawa, Mayes and Delaware; Councilor, Dr. R. L. Mitchell, Vinita. Term expires 1918.
11. Wagoner, Muskogee, McIntosh, Haskell, Cherokee and Adair; Councilor, Dr. P. P. Nesbitt, Muskogee. Term expires 1920.
12. Hughes, Pittsburg, Latimer, LeFlore and Sequoyah; Councilor, Dr. Ed. D. James, Haileyville. Term expires 1920.
13. Atoka, Pushmataha, Bryan, Choctaw and McCurtain; Councilor, Dr. J. L. Austin, Durant. Term expires 1920.

## CHAIRMEN OF SCIENTIFIC SECTIONS.

Surgery and Gynecology—Dr. LeRoy Long, Oklahoma City.

Pediatrics and Obstetrics—Dr. T. C. Sanders, Shawnee.

Eye, Ear, Nose and Throat—Dr. L. A. Newton, Oklahoma City.

General Medicine, Nervous and Mental Diseases—Dr. A. B. Leeds, Chickasha.

Genitourinary, Skin and Radiology—Dr. W. J. Wallace, Oklahoma City.

Legislative Committee—Dr. Millington Smith, Oklahoma City; Dr. J. M. Byrum, Shawnee; Dr. W. T. Salmon, Oklahoma City.

For the Study and Control of Cancer—Drs. LeRoy Long, Oklahoma City; Gayfree Ellison, Norman; D. A. Myers, Lawton.

For the Study and Control of Pellagra—Drs. A. A. Thurlow, Norman; L. A. Mitchell, Frederick; J. C. Watkins, Checotah.

For the Study of Venereal Diseases—Drs. Wm. J. Wallace, Oklahoma City; Ross Grosshart, Tulsa; J. E. Bercaw, Okmulgee.

Necrology—Drs. Martha Bledsoe, Chickasha; J. W. Pollard, Bartlesville.

Tuberculosis—Drs. L. J. Moorman, Oklahoma City; C. W. Heitzman, Muskogee; Leila E. Andrews, Oklahoma City.

Conservation of Vision—Drs. L. A. Newton, Oklahoma City; L. Haynes Buxton, Oklahoma City; G. E. Hartshorne, Shawnee.

First Aid Committee—Drs. G. S. Baxter, Shawnee; Jas. C. Johnston, McAlester.

Committee on Medical Education—Drs. A. L. Blesh; A. K. West; A. W. White, Oklahoma City.

State Commissioner of Health—Dr. John W. Duke, Guthrie, Oklahoma.

## STATE BOARD OF MEDICAL EXAMINERS.


LeRoy Bonnell, President, Chickasha; R. V. Smith, Secretary, Tulsa; J. J. Williams, Weatherford; B. L. Dennison, Vice-Pres., Garvin; W. T. Ray, Gould; M. Gray, Mountain View; H. C. Montague, Muskogee, and O. R. Gregg, Alva.

Reciprocity with Georgia, Kentucky, Mississippi, Nevada, North Carolina, Wisconsin, Kansas, Michigan, Nebraska, New Mexico, South Dakota, Tennessee, West Virginia.

Meetings held second Tuesday of January, April, July and October, Oklahoma City.

Address all communications to the Secretary, Dr. R. V. Smith, Daniel bldg., Tulsa.

# THE JOURNAL

of  the

## Oklahoma State Medical Association

VOLUME X

MUSKOGEE, OKLA., JULY, 1917

NUMBER 7

### BLADDER STONE WITH CASE REPORT.\*

L. S. WILLOUR, M. D., McAlester, Okla.

Stone in the urinary bladder is not an uncommon condition, but just having recently seen a case that had been suffering from this condition for three months which had been under treatment during that time for cystitis, I thought perhaps a short discussion of the subject might not be out of place.

In the first place, I want to make the broad assertion that cystitis is rarely, if ever, a primary condition. This fact has been brought to our attention during the past few years with the great development of cystoscopy and ureteral catheterization in conjunction with radiography.

Bladder irritation, frequent urination, hematuria; continuous and intermittent, hemoglobinuria and pain along the urinary tract all now point with more or less accuracy to some specific condition. Bladder irritation at once makes us think of either a foreign body in the bladder, tumor, or some diseased condition higher up in the urinary tract. Hematuria and hemoglobinuria suggest malaria, papilloma of the bladder, tuberculosis, hypernephroma, kidney or ureteral stone, etc., so we are confronted with the proposition of making a differential diagnosis, which, with our advanced clinical knowledge and improved laboratory technique, we are, in most cases, able to do.

Taking up a few of these conditions most frequently met, we shall endeavor to point out some of the distinguishing characteristics:

**Hypernephroma** presents a very typical form of hematuria. It is of an intermittent type, the patient giving a history of blood in the urine occurring at intervals of a month or more, and these intervals becoming shorter and shorter until the blood may be continuously present. This hematuria is only accompanied by pain when a blood clot forms in the ureter, it causing pain by obstruction and movement. Metastasis may occur in this form of renal tumor, usually in the lungs, liver and long bones.

Just a suggestion in passing, relative to the operative procedure in these cases, and that is: that the vein be amputated as deeply as possible, as these tumors often extend into the lumen, as I saw in a specimen recently removed by Dr. McCallum of Kansas City.

**Malarial Hematuria** can be distinguished from other forms by obtaining the history of malarial paroxysm and the finding of the plasmodia in the blood.

\*Read before Section on Surgery, Medicine Park, May 9, 1917.

**Renal Tuberculosis:** Perhaps more often in this condition than in any other is a diagnosis of cystitis made when the pathology is primarily in the kidney, the chance for early operation and recovery having passed while the patient has been taking the remedies prescribed and having his bladder irrigated. Ureteral catheterization, microscopic examination of the urine and guinea pig injections give us every opportunity to diagnose this condition.

**Tuberculosis of the Bladder** is rarely a primary condition. This is practically always of origin in the kidney, and the infection descends to the bladder.

**Papilloma of the Bladder:** The symptoms of this condition need not be mentioned. Suffice it to say that in all cases of blood in the urine, unless positively accounted for, cystoscopy should be practiced and the bladder inspected for tumor.

**Kidney Stone:** Kidney stones are of two varieties: Primary and Secondary. Primary kidney stones comprise a very large percentage of nephroliths. Secondary kidney stones are those occurring in conjunction with some other primary pathology as we frequently see them in conjunction with tuberculosis. There is some question among authorities as to whether the tubercular process or the kidney stone is the primary condition.

The symptoms presenting are pain of sudden onset and excruciating character referred along the course of the ureter to the bladder, testes and external genitals, even down the thigh along the distribution of the anterior crural nerve. Pain usually subsides suddenly. Any condition which produces sudden increased intracapsular tension may cause this symptom. Symptoms of colic are often entirely wanting, the pain being of a dull, heavy character, sometimes in the region of the kidney, and often referred to the bladder. A number of these cases are treated for bladder conditions. Blood is often present in the urine, either microscopically or macroscopically, and even sharp hemorrhage may occur.

The X-ray demonstrates a large percentage of kidney and ureteral stones.

When kidney stones occur in the pelvis of the kidney or ureter, the diagnosis is often possible by the use of the cystoscope and waxed catheter. If the waxed catheter can be brought in contact with the stone, the faint markings resulting from the contact may be seen in the wax.

**Stone in the Bladder:** These may originate either in the kidney or bladder. In the former instance, they pass as small stones from the kidney and form a nucleus around which urinary salts accumulate and rapidly increase in size. In these cases, a history of renal colic or the passing of stones or sand may be elicited. The primary stone may have for its nucleus, bladder cells or a foreign body as in the case I shall report.

It is the close resemblance of the symptoms of this condition to the other conditions enumerated that has led me to present this subject. Pain in the bladder, referred to the external genitals, frequent urination, difficulty in urinating, blood and pus in the urine, etc., all may be present in any of the conditions mentioned.

This diagnosis can be readily cleared up by the use of the X-ray and cystoscope. We accompany our case report with an X-ray picture that shows the stone most clearly. The cystoscope was not used, as our diagnosis seemed to be complete from a tabulation of the symptoms and the X-ray examination.

### Case Report.

Mr. G. T. White; age 34; occupation miner; was of a very nervous type, came complaining of pain in the region of the penis. He had frequent and painful urination; temperature 99.4-5; pulse 100. History shows a continuation of these symptoms extending over a period of three months. Physical examination showed tenderness over the bladder region; no pain elicited by first percussion over either kidney. It was impossible to pass a urethral sound or cystoscope without an



anaesthetic. Microscopic examination of the urine showed a large amount of pus, some blood and bladder cells. The radiograph shows clearly a large stone in the bladder. This stone was removed by the suprapubic route, and when cut in half, showed a nucleus of some foreign material resembling gum. The nucleus of this stone is gum, and was pushed up the patient's penis by himself, as he admitted on close questioning.

Cases of this same character have been reported many times, still they are of some interest, as an early diagnosis with proper operative procedure gives relief, for which the patient is truly thankful.

### Discussion

**Dr. White, Muskogee:** I think the point the Doctor wishes to bring out espec-



ially is that cystitis of the bladder is not a primary disease. It is a symptom or secondary to such things as ureteral stone, kidney stone, kidney growths, tuberculosis of the kidneys, pus tubes in the male and enlarged prostate. These diseases produce frequent urination, but not always a true cystitis. The cystoscope is undoubtedly the most valuable instrument we have in clearing up the diagnosis of bladder troubles. The X-ray, however, is a valuable aid. Of vast importance in the case of the male is that of pus tubes. This matter was brought to the attention most forcibly a few years ago by Dr. Meyer of Chicago. The Doctor exhibited at the meeting of the American Medical Association at Minneapolis, X-ray pictures of the base of the bladder, showing these tubes and pointing out the importance of diagnosis. Frequent urination should receive more attention than a diuretic prescription and suggestions. The cause should be ascertained.

**Dr. Ramsey, McCurtain:** This calls to mind a couple of cases of mine lately. One of them was a fistula for which an operation had been performed, the stitches were very deep, and took in mucous membrane; within five weeks after the operation the patient fell into my hands and I found a little stone on the end of the stitches, up in the bladder. The other case was one in which a hair pin had been inserted into the female bladder about four years ago.

**Dr. Willour, closing:** I was, of course, aware of the fact that there were many other things causing bloody urination other than those I mentioned. I just brought out the most important things. I would say in this connection, although the stone when removed show mucous, we do not know it when we operate. I feel very sure that there are a lot of these cases that would come under the head of other things that would really be cystitis.

---

### TREATMENT OF CLUB FEET.\*

ROBT. L. HULL, M. D., Oklahoma City, Okla.

Congenital malformations or deformities of any character present difficult surgical problems, and the deformity of congenital club foot is no exception to this rule. While it is in every way a curable condition, this desired result can be obtained only by the most intelligent, thorough, painstaking and skillful treatment extending for many months and even years.

It is true that there are many cases that respond readily to treatment, and can be decidedly benefited in a short period of time; it is also true that in many instances the deformity can be corrected and function secured after a simple operation and retention in plaster for a few weeks; but to dismiss a case as cured before an over-correction has been secured and maintained without apparatus for many months is a dangerous procedure. The constant tendency to relapse is always present, and a foot that is apparently straight and even over-corrected, may, in the course of a few months, relapse to nearly its former condition.

In club-foot there is no such thing as half cures. Half cures are no cures at all. A cure in its broadest sense is a foot normal in every way as to position and function. A foot, the sole of which is flat on the ground, with no inversion or adduction. A foot that can be moved through the normal range of motion in plantar and dorsal flexion, and in adduction and abduction. I am well aware of the fact that these requirements are obtained in only a very few instances.

It is impossible to state with any degree of accuracy, the number of babies that are born yearly in this state with a club foot or club feet. It is also impossible to estimate the number of these that are cured; I am sure that a surprisingly large number of them are permitted to reach adult life with the deformity uncorrected. I wonder in these cases if such a one may not feel that he has been neglected.

The principles of treatment must be based upon a clear conception of the condition to be overcome. A club foot must be recognized as a distorted foot. No elements or structures are lacking, but all are abnormally arranged and misplaced, bones are altered in shape and relationship; some of the ligaments are shortened, others lengthened; a few of the tendons are misplaced; the foot is in a position of inversion with an adduction and depression of the fore part and elevation of the heel. To correct such a deformity, therefore, it ought to be apparent that the most rational way is to aim to secure a reposition and readjustment of all the structures entering into it. It can be seen that this cannot be secured by cutting

---

\*Read before the Section on Surgery, Medicine Park, May 9, 1917.

operations to the exclusion of other methods. The most rational procedure is the application of gradual pressure, or by repeated efforts, applied against the deformity, and, here, it may be reiterated that a club foot really possesses two deformities, one of varus, and one of equinus, and in the treatment of them it is necessary that the varus be first corrected before any attention is given the equinus.

The methods which we possess for this work are known to all—Manual manipulation with or without retention in plaster of paris—forcible stretchings under an anaesthetic, and retention in plaster of paris—division of plantar fascia—tenotomy of the heel cord and of other contracted structures—open incision or Phelps operation—bone operations as osteotomy of the neck of the astragalus, and removal of wedge shaped portion of bone from the outside of foot—and finally as astragalectomy. These are efficient methods when used alone or combined, and when properly selected and skillfully used. The reason for so many failures and relapses is not because of ineffectual methods, but because of lack of appreciation, and knowledge, and judgment in the use of them. In this work experience is a most important factor in obtaining a successful result.

As to the time when it is best to begin treatment, it is the opinion of the writer that the earlier it is instituted, the better. I am at a loss to understand the reason for the idea prevalent that it is better to wait for several months or even a year or more. It ought to be apparent that the deformed foot is more amenable to correction during the early months of infancy than at a later period. It is therefore desirable that treatment should begin within two or three weeks after birth, or as a fellow practitioner has stated, before the cord is tied.

The method usually employed during the first year is simple manipulation, with or without retention in plaster of paris. In very mild cases, simple manipulation and fixation by adhesive plaster will accomplish the result; in others, and by far the majority, it is well to follow the manipulation by immediate retention in plaster of paris. In this way it is possible to gradually unfold the foot and to place its structures into normal relationship. These plasters are changed every week or ten days, at which time the foot is manipulated and a gain towards correction secured and maintained. The method is simple in principle but rather difficult in practise. I have no hesitation in asserting that the application of an efficient plaster in these cases is a most difficult task. To apply one that is light, and smooth and one that will remain in place on the fat foot and leg of a screaming, kicking baby, calls for some degree of patience and skill.

In the majority of cases, if thus treated early and faithfully, the deformity will be corrected when the walking age is reached. At this period the plaster can be discontinued, and a suitable brace applied. Vigilance in treatment should not be relaxed, and cases should be carefully followed for a few years. It is very seldom that a cutting operation of any character is necessary in the first year; and then, only a fasciotomy, or possibly a division of the heel cord.

In feet seen after the first year, and before the second, the problem presented is somewhat more difficult. Many can be cured by one, two, or more forcible manipulations or stretchings under anesthesia, supplemented possibly with division of plantar fascia, and simple tenotomies. The foot is to be placed in over-corrected position, and maintained in that position by plaster of paris. A leather shoe is worn over the plaster and the child is urged to walk. Plasters are changed when necessary, and are discontinued when foot is thoroughly over-corrected. Upon the discontinuance of them a brace is applied and daily stretchings given to foot. Bone operations are not to be advocated at this time but are to be reserved for older cases.

Feet that are seen for the first time after the second year, and relapsed cases, are still more difficult to handle. Many of them will respond to forcible stretchings under anesthesia. In resistant cases further procedures used are the simple tenotomies and in more resistant cases, bone operations, as osteotomy of neck of



astragalus and removal of wedge shaped portion of bone from outside of foot may be required. In some cases the correction can be best secured by the open incision or Phelps operation, but one must be cautious and keep the foot under observation for a long time to counteract any tendency to relapse from the contraction of the scar tissue.

Adult cases can be handled as cases in children. In some of them the condition can best be met by an astragalectomy.

The points to be emphasized in this paper, are: 1st. The desirability of beginning treatment as early as possible. 2nd. The employment and use of the slower but more certain methods of correction, by manipulation and stretching, with or without an anesthetic, and retention in plaster of paris. 3rd. The restriction of all cutting operations to cases that do not respond to the forcible stretching and manipulation.

### Discussion

**Dr. Stout, Oklahoma City:** It seems to me there are too many children at this date growing up with deformed feet. This seems to be a crime to me. There could certainly be many corrected if Dr. Hull's treatment for babies was carried out.

Another point I wish to bring out is that these patients should be under observation a long time on account of the tendency of cases to recur. These should be treated while children in order not to grow up deformed. These are the cases I am most interested in. They think there is nothing that can be done for them, some of them permit amputations. I think that is not necessary. Practically all these adult cases can be restored. Some of them submit to amputation when it seems it is our duty to instruct them that such feet can be restored.

---

### SALVARSAN AND NEOSALVARSAN.

O. S. Ormsby, Chicago (*Journal A. M. A.*, March 31, 1917), says that after six years' experience with these two preparations, we ought to have pretty definite ideas as to their value and their limitations. The early hope that a single dose of salvarsan could cure syphilis was soon abandoned but during the first year there were many recurrences, owing to this notion. The combined use of salvarsan and mercury is now the rule, with potassium added in certain cases. The success in treatment, it should be said, depends largely on the stage of the disease when it is instituted, the earlier the better, and we now know that salvarsan and neosalvarsan are the most efficient drugs so far discovered for the disease. Even in the earliest stages, mercury is recommended as an adjunct, and in all but these earliest cases it is indispensable and in the so-called tertiary and latent cases, especially those involving the nervous system, the iodid is also advisable. Ormsby deals at length with the subject of the reactions, the greater part of which are insignificant. The most serious ones should be avoided. These are largely due to faulty technic. Preceding the salvarsan with mercury in the early stages and a dosage sufficient to control the disease is important to prevent recurrences and relapses. Valuable lessons have been learned by an intensive study of the question of efficient management of syphilis. As regards the relative merits of the two drugs both are sufficient, but the preponderance of opinion that apparently exists of the greater efficiency of salvarsan is somewhat offset by the difficulties of its administration and the more frequently following reactions. The problem of reducing toxicity rests with the manufacturers. Ormsby does not accept the opinion that greater care must be used after the fourth injection. The major portion of severe reactions, untoward results and fatalities have followed the first injection. Only the discovery of a more potent agent can displace these drugs in the treatment of syphilis.

## DO'S AND DONT'S OF PELVIC SURGERY.\*

ROSS GROSSHART, M. D., Tulsa, Okla.

This field of surgery is one that comes under the surgeon's observation more frequently than any other surgical region and we are sometimes in doubt as to how to handle certain conditions when we have reached the pathology. This has happened to me on various occasions and doubtless has been the worry of all of you. Taking it for granted we all know the normal anatomy and physiology of the pelvic region, I will not take up time on its discussion, but will give a few do's and dont's. I will take up each part in detail.

**Tubal Conditions:** Pus tubes due to gonorrhea should always be removed as they never become normal, rarely ever permit pregnancy, and are liable to flare up at any time, usually give enough pain to cause the woman to be an invalid a good part of the time. By the extension of the inflammatory process and by adhesions frequently involve the ovaries and most important of all are apt to be the cause of ectopic gestation. The above statement may be criticized but in the last two years Dr. Lemmon and myself have had about twenty cases of extra-uterine pregnancy and in all of these cases there was a history of an old gonnorrheal infection and the tubes were affected on both sides in every case. I think this one fact alone justifies the removal of all gonnorrheal tubes. In these cases, if there is pus or an oozing of blood, put in vaginal drain for safety.

Salpingitis due to abortion and puerperal fever, if they are not endangering the patient's life, may be left in as the infection is as much parametrial as intra-tubal and these cases often clear up without any sign of adhesions or subsequent trouble.

Hydrosalpinx and haematosalpinx should be removed, as in these cases there is an old chronic inflammation present and the work of salpingostomy is futile because pregnancy practically never occurs in these cases and the remains of the tube are a menace to the patient's health.

**Ovaries:** It is one of my maxims never to remove both ovaries except in carcinoma of the uterus. Malignant neoplasms should be removed. Rarely is this condition bilateral. Even in tubo-ovarian abscesses we can usually save enough ovary to carry on function. Unilocular and multilocular cysts of the ovary demand their sacrifice. The small so-called cystic ovaries should never be removed as this condition is due either to low grade inflammation with secondary circulatory changes or to primary interference with circulation. For the last seven years I have been transplanting the ovaries in these cases where formerly I sacrificed them. The method which I use is to puncture the cysts, scarify an area on the posterior surface of the uterus the size of the ovary and being careful to make no torsion of the pedicle. Place the ovary against the scarified surface and fasten it in place with No. 00 plain cat gut, always accompanying this with some fixation or suspension of the uterus. This method has given uniformly good results even in cases where my judgment said remove the ovary. The rationale of this procedure is that many of these organs are either prolapsed or the circulation interfered with by the dense capsule so that there is present a chronic congestion. By elevating the ovary we do away with the torsion of the veins of the pedicle in prolapsus, and by the scarification of the surface give the ovary an additional blood supply of small vessels over a large surface which helps compensate for the congestion due to a dense capsule. I also use this method whenever I remove the tubes as the cutting of the broad ligaments tend to weaken the antero superior support and thus we may prevent a subsequent prolapse.

**Varicocele of the pampiniform plexus:** Do not do a simple ligature of the vessels. Either double ligate and cut out intervening section or remove tubes going well down on the broad ligament.

\*Read before Section on Surgery, Medicine Park, May 9, 1917.

**Uterus:—Tumors—Fibro Myoma:** Do not do a myomectomy. Do a supra vaginal hysterectomy. It is a more simple procedure, gives just as low a mortality and cures. Myomectomy too often fails to cure and therefore subjects the patient to a second operation.

**Carcinoma:** If of fundus do not do a mere hysterectomy, go well out on the infundibulo pelvic ligaments and remove large part of broad and round ligaments. In cancer of cervix do a preliminary cauterization followed in two or three weeks by the Wertheim operation.

In cases of irregular bleeding after age of 35, always think of cancer and if of fundus do a diagnostic curettage, sending scrapings to laboratory. In suspicious looking cervix excise a piece for microscopical examination of it.

**Pregnancy in Uterine Abortion:** Do not make unnecessary examinations. When necessary shave vulva and cleanse the same as you would for doing a vaginal celiotomy. Do not pack a vagina in the home in threatened miscarriage unless patient is bleeding severely. Take her to a hospital to do this. After foetus has passed if placental tissue does not all come away, do not trust to nature to take care of it. Do a curettement. When infection has followed abortion, do not help it along by curetting. If it is septic, it will get well itself. If streptococcal, you are only helping it along by opening up new blood and lymph spaces and tearing down nature's barrier.

**Extra Uterine Gestation:** If diagnosed before rupture, operate at once. If seen at time of rupture, send patient to hospital and watch carefully for signs of hemorrhage. If these are present open abdomen immediately. If signs of shock and hemorrhage abate, wait a few hours then operate. In case of doubt, operate. If seen some time after rupture, do not delay operation as you can never tell when secondary bleeding will start. If operated same day as rupture, after cleansing abdominal cavity, thoroughly, close without drainage. If operated after this time, it is safe to use a vaginal drain for a few days. Do not forget that sudden onset of terrific pain in abdomen, tenderness in lower inguinal regions plus an irregular menstrual history is almost pathognomonic of ectopic and that this triad justifies operation.

**Fibrosis Uteri:** Do not do a curettement and then when you find no endometritis and bleeding does not stop, think that all you can do is to give ergot and belladonna. Do a supra vaginal hysterectomy.

**Endometritis:** Do not do a half way curettement. Do not neglect to use small curette to get up into cornu of uterus.

**Endocervicitis:** If one or two applications of carbolic acid does not cure condition, do not fool around with medical means—curette thoroughly. This usually cures. If there is an associated hypertrophic condition amputate the cervix, if there is laceration without hypertrophy, do a trachelorrhaphy.

**Hypertrophy of Cervix:** Do not do a trachelorrhaphy, amputate as these conditions often become malignant.

**Laceration of Cervix:** If there is a necessity for an anesthetic, always do a trachelorrhaphy, as it obviates danger of cancer. Be sure to remove all of scar tissue.

**Prolapsus Uteri:** If in first degree with no cystocele, do a curettement a perineorrhaphy and Gilliam suspension. Do not do one of the round ligament operations, as the strain is thrown on the weakest part of ligament and they frequently give way. Do not do a ventro suspension, as they are frequently unsatisfactory and there is also danger of it becoming a ventro fixation. If of second degree, with moderate cysto and rectocele, do curettement. If cervix is enlarged, amputate. Repair perineum. Do not trust these cases to a mere round ligament suspension, do either a Dührssen interposition if womb is of normal size,



if small and atrophic, do a ventro fixation, placing the peritoneum and fascia around body, allowing the fundus to lie immediately under the skin. If of third degree, currette, amputate cervix. If uterus is of normal size, do a Dührssen. If body is small, do a Goffe. That is separate bladder as for an interposition operation, remove uterus through vagina, sew stumps of round and broad ligaments together and interpose them between bladder and vagina. This in my experience has been satisfactory.

**Perineum:** Laceration should be repaired at time of child birth by dissecting back flaps, the levator ani muscles exposed and brought together in mid line, same as in a late secondary repair. Do not merely sew the trigone together, as it does not make a good repair. The muscles must be interposed. The operation I use is a triangular denudation. Sew opposing edges of vagina. I then take silk worm gut, go through skin down through muscles and out, then catch muscle of opposite side and come out through skin on same side I entered about one-fourth inch above. I usually put in four or five of these stitches. It is more simple than sewing muscles separately and then reinforcing with silk worm or silver wire.

**Complete Lacerations:** Do not try to catch up ends of sphincter and hold with suture, make a scissior denudation of vagina and skin well down over ends of sphincter, then sew up vagina, then interpose muscle, then by series of silk worm gut or silver wire bring denuded area together. This does not bring cut ends of sphincters absolutely in contact but does bring them close enough so that the scar tissue which forms gives the ends of the sphincters firm enough support to overcome all incontinence of the bowel. This is the best operation and in my hands has given 100 per cent satisfaction.

**Cystocele:** If slight, do a perineal repair and Gilliam. If moderate, do an anterior colporrhaphy combined with the above operation. If large, do an interposition operation, Dührssen or Goffe, as this is the only method which does not allow a recurrence.

**Rectocele:** Small and moderate sized rectoceles are cured by simple perineorrhaphy. If large, do a rectopexy. Dissect up vagina from rectum up to pouch of Douglas, then with a chromic cat gut suture through apex of rectocele, fasten it high in vaginal wall, being careful that tension is not great enough to cut out suture. Complete operation by a perineorrhaphy.

**Drainage:** We are all changing our ideas in this matter. Drainage where we formerly did not, and not draining so much where formerly we did.

**Pus Tubes:** If acute, use both anterior abdominal and vaginal drainage. If chronic tubes, where temperature and W. B. C. are normal, if there is no oozing of blood where tubes are removed from their bed and no tissue of low vitality left, then close tight. If there is any oozing or any tissue of low vitality left in, always use a vaginal drain, as a large number of these cases become infected and secondary colpotomy for evacuation of infected blood clot becomes necessary.

**Ectopic:** If operated same day of rupture and oozing is not present, do not drain. If operated after first day or there is oozing present, use a vaginal drain.

**Cul de Sac Abscess:** Always drain.

**Appendicitis:** If acute but no gangrene is present, do not drain—the peritoneum will take care of itself. If gangrenous, drain bed of appendix. If perforated, drain bed and cul de sac. If abscess has formed, drain abscess, do not break through wall in order to set a drain into cul de sac.

**Sutures and Ligatures:** Do not trust plain cat gut as a ligature on the large pelvic vessels, as the knot often unties during the first 24 hours. Use 20-day chromic catgut in all pelvic work. Do not use plain or iodized for the fascia; use chromic 20-day gut. Do not neglect to bring muscles of belly wall together. If wound is large or there is infection present, do not neglect to put in silk worm gut

retention sutures. In perineums, do not trust chromic cat gut to hold muscles, use silk worm gut or silver reinforcement.

The above do's and don'ts apply to my pelvic surgery, in fact, are my surgical maxims. Many will differ from me, especially on the removal of gonorrheal tubes and on drainage, but it is those things which give us the best results that we adhere to and what gives results in one man's hands may not do so in another's.

### Discussion

**Dr. Berry, Okmulgee:** The only feature of the paper I care to discuss is the curettement. I notice Dr. Grosshart mentioned curetting in the uterus many times, but I want to say in my experience it has largely met with failure. I get away from curetting experience for the removal of something that does not belong in the uterus as often as possible. I do not see why a suspect should have the mucous of the uterus removed when they do not remove the mucous of the stomach. I had a woman that had had six or seven curettements. I took this uterus to Dr. Frank Hall and he said that was the result of constant curetting. He said he thought it should be considered a criminal operation to remove the mucosa of the uterus of a woman. I do not believe it can be done with any satisfaction.

**Dr. Livermore, Chickasha:** I just have one point in discussing this paper of the doctor's, in taking up the treatment of the ovaries. Today many of us hesitate to remove all the ovarian tissue in contact with the other tissue when we remove ovarian tumor. I never do it now but what I think maybe this patient might fall into somebody else's hands and they will think Livermore should not have removed the ovaries. In the fibro-cystic ovary I have been doing for a year or more a puncture and removing practically no ovarian tissue.

**Dr. Riley, Oklahoma City:** There is just one point that is not quite clear in my mind, and that is in regard to curettement in suspected cases. I believe this is something that is along the same line as tumor or cyst; that this should be done in the operating room with the patient ready for a complete operation and should not be done in the office and the suspect sent away to be examined later for carcinoma. There is just as much chance of scattering cancer cells in the removal of part as in the cancer of the breast.

**Dr. Hartford, Oklahoma City:** Howard Hill has made some extensive studies of the peritoneum by taking sections of the peritoneum and studying them. He has given us the principle that to my mind is one of the best principles in this work; that is, that muscle should come to muscle, skin to skin, etc.

**Dr. Grosshart, closing:** In answer to Dr. Berry on curettment, I will say a few words. He spoke of removing the mucous membrane of the stomach, etc. This mucosa does not regenerate. The uterus he spoke of that had had repeated curettement was where the case should have had hysterectomy instead of curettment. Dr. Riley brought out the topic which the paper did not enter into and made it clear, and I believe that where you do not want to handle and massage the tissue around a cancer, the patient should be prepared for a hysterectomy when you are going to make a diagnosis. The doctor over there who discussed the paper in regard to the cystic ovary hits the key note of the proposition as to the cause of cystic ovaries. We find them in girls fifteen years old, a small cyst that finally degenerates the ovary and makes a low grade of resistance. If the tonsils and teeth and throat were cleaned up before the menstrual period starts in, we would get rid of 90 per cent of these cysts. I agree with Dr. Hartford absolutely that tissue should be put to tissue, skin to skin, etc. If these things are not done we do not have a successful operation.

## HYSTERECTOMY FOR CARCINOMA OF THE UTERUS WITH GALVANO CAUTERY.\*

V. BERRY, M. D., Okmulgee, Okla.

Cancer of the uterus has loomed as a dark shadow over womankind for all the centuries that have passed; and when we count all the time and thought given to efforts at the cure of this malady we are bound to admit, as professional men, that we have hardly received just interest on the expenditure. It is a fact that we cannot view our progress with any great satisfaction. In justice to the profession, and with no intention to unload any of the burden unjustly on the shoulders of others, I must say that a fair share of the present status of the treatment of this disease lays at the door of the patient, for how often do we find the patient presenting herself for examination long after she "has sinned away her days of grace." I cannot help but revert to the patients that come to examination who say: "Yes, I knew there was something wrong with me for a long time; for my doctor has been trying to control the hemorrhage for several months by local treatment, but it grows worse all the time." You who are doing special work along this line have heard that statement many times. When I hear it I cannot help but revert to a blunt-spoken surgeon who on examining such a case that had progressed beyond hope, and being told by the patient that "her physician said he *thought* she had cancer," remarked dryly that "a section hand should be able to tell her so." Suffice it to say there should be a revolution, educational in character, along the line of diagnosis of this terrible malady that should include both the laity and the profession, for the only hope is to get an early diagnosis, together with an early and complete removal of the affected organ.

Balfour, Vol. VII, of Mayo's Clinics, points out the fact that 40 per cent of persons dying of cancer die of infection, and not from metastases. That being true, how necessary it is, and I might say how hopeful the outlook, if these patients could come to an early operation. My belief is that by early operation, properly done, the percentage of permanent cures could be more than trebled. This means everlasting vigilance on the part of the physician in co-operation with an enlightened public. Is such a day coming? The answer lies with you and me, to a large extent.

Undeniably we are forced at times to make the best of circumstances as they are, and that being true my paper is an effort to point out the best method of dealing with the surgical treatment of cancer of the uterus as it is presented to the surgeon today.

"Hope springs eternal in the human breast," and as a result we are looked to as a last resort to bind the slender thread that separates the patient from an impending doom. If they cannot be permanently cured they want every day of comfortable existence that can possibly be added to their life, and it is the duty of the surgeon to comply with this wish with a conscientious and true statement of the situation to the patient.

For the past twenty years I have been doing hysterectomy by both the abdominal and vaginal route until I believe I can say without boasting I have acquired some skill in the operation, having done complete vaginal hysterectomy in 21 minutes, and recently an abdominal in 14 minutes aside from closing the wound. For fibroids I usually do the ordinary sub-total operation. However, for carcinoma my results have been so unsatisfactory in the way of early recurrences that I decided to either abandon any operation in advanced cases, or find a better way; so last year, after giving much thought to the literature on the subject I decided to try the galvano-cautery. Naturally, like most surgeons, I was greatly impressed on the first appearance of Percy's article on his special technique of the cautery operation. However, being built rather on conservative lines I waited, and the more I waited and investigated the more doubtful I became. There is no question

\*Read before Section on Surgery, Medicine Park, May 9, 1917.



in my mind that if Percy's heat method could be applied with a sure method of avoiding post-operative complications that are so prone to follow, it would be the operation of choice in most cases. However, you who have followed closely Percy's work, and others, with his technique know of the large number of bladder, ureteral and rectal fistulas that are a sequel to his method. In September, 1915, when at Mayo's Clinic, I saw Dr. Judd closing a vesical fistula in a very obese patient as a result of this technique, I assure you it was a formidable job. He remarked to the visitors present that there was no known way of avoiding such accidents in a certain proportion of cases. I also note an article by Leonard and Dayton, of New York, and Baltimore, in *Surgery, Gynecology and Obstetrics* for February, 1917, recording two cases in which death was due to septicaemia as a result of local infection due to the wide mass of necrotic tissue resulting from the slow and long continued heat through Percy's technique.

When we consider these facts, and the extreme difficulty, I might say impossibility of carrying out the operation with a certain knowledge of the degree of heat you are using, and that a two-stage operation is necessary in most cases, I do not feel justified in advocating its use except in very exceptional cases.

The Wertheim operation I have never attempted on account of its high mortality—19 per cent in the hands of its originator. When you balance the immediate mortality against the increased cures in those cases that survive, the gain is not enough to justify the operation in my judgment.

How strange it is that we have forgotten so many mile-posts along the professional pathway. How many of us worked along the highway of our profession and hardly noticed at all the work of J. Byrne, of Brooklyn, who in 1872 began the removal of the cancerous uterus by the galvanocautery, and up to his death in 1902 had performed 367 operations without a death. We must take off our hat to this pioneer surgeon and acknowledge that no man living today has surpassed it. We are prone to forget a lot of good things in our effort to grab at every new idea advanced, and it is a question if we would not be better off if some of us were educated backward just a little instead of looking so much to the future, and it is with some satisfaction that I note Kelly and Noble, in their more recent work on Gynecology and Abdominal Surgery give Dr. Byrne full credit for his work, and call attention to the fact that this work was done with the crude instruments of his time which consisted of an ordinary storage battery and such cautery knives as were procurable. Contrast such appliances with the modern transformer and cautery knife and you will give Dr. Byrne all the greater credit for pioneering in this field. The transformer I have is nothing unusual except as to its reliability, and power to hold the knife at a steady heat; also any desired degree of heat. The knife is very heavy and has a mineral handle that can be easily sterilized by sponging with pyxol solution, as can also the knife cord. The patient being prepared as for an ordinary vaginal hysterectomy, the uterus is held by an expanding tenaculum placed inside the uterus, and pulled well forward with the vagina held wide open by posterior and anterior retractors. With the knife held at a dull heat I now burn through the anterior vaginal vault close to the crevix, and when through I push the bladder off the anterior face of the uterus with the finger covered with gauze; and here I wish to emphasise the fact that this is the only part of the operation where any of the tissues are separated other than with the actual cautery. I now tilt the cervix upward and burn through the posterior vault close up to the cervix. A gush of serous fluid pours through this opening announcing successful severing of the tissues. The anterior and posterior incisions should not quite meet laterally, a separation at either side of one quarter inch being about what should be left. I now grasp the anterior face of the uterus through the anterior opening as high up as convenient and pull downwards and outwards as far as possible and then grasp higher up with another tenaculum and repeat till I get the fundus and body clear outside the opening. This inverts the broad ligaments and other attachments so that the clamps can be placed from above downwards on the tissues. This is important, for when you make strong traction downward and to the opposite side from where you are working you will not endanger the ureters. In that manner I

now apply the clamps and cut between with the cautery, burning very slowly so as to thoroughly char the stumps. After freeing between the two clamps I then do the same on the opposite side. I now clamp the deeper attachments and sever with the cautery as before, always having the assistant make strong traction to the side opposite from where I am working.

Great care should be exercised to avoid adjacent tissues, but with proper dexterity there is no excuse whatever for an accident. Here I might note that I wrap the shank of the cautery with dry gauze, or asbestos, as it gets uncomfortably hot and the radiation might burn the vagina if such precaution was not taken.

By following down the side of the uterus it is soon entirely severed and I then burn any infiltrated tissues thoroughly if such there be, and lay strips of gauze around the shanks of all the clamps after placing them as compactly as possible. This is done to protect the vaginal walls from pressure. The clamps are left on for from 12 to 15 hours, when they are removed and the gauze left in position for three or four days. It is astonishing how little the patient suffers, and I have had no shock at all following. In fact, the convalescence is usually complete in two weeks. As an example I will cite the following case: Mrs. W, aged 44, was operated in Okmulgee Hospital February 18, 1917. She had a large exfoliating type of carcinoma of the cervix, the mass being as large as an ordinary orange. It was foul and bleeding, the patient showing plainly a secondary anemia from the drain of blood which she said had been almost continuous for six months. She was also suffering from mixed infection, and was at a very low ebb generally. The operation was just as I have described; temperature never ran over 100 F, and the pulse 110, and she had absolutely no shock. In fact, after the second day her only trouble was slight sepsis from absorption through the necrotic stumps, and on the sixteenth day after operation she was taken to her home. Contrast this with the Wertheim operation.

In conclusion I will quote Balfour in Mayo's Collected papers, Vol. VII, page 387, "this operation (clamp and cautery) has given as good results under similar conditions as have been obtained from total abdominal hysterectomy and with a lower operative mortality."

It is hardly necessary for me to say that I believe Percy's operation superior to any other if we could eliminate the accidents that are liable to happen during its performance. With the galvano-cautery the heat is applied in a more limited area, and *directly* under the eye; and I believe with as much effectiveness as by the Percy technique. We are bound to admit that if the Percy method could be applied in a selective way; that is, the heat directed to pathological tissue only, and normal tissue not affected, it would be ideal. However, I am sure there is no possible way of doing this; hence I feel safe in saying the more rapid method of dividing the tissues with the galvano—cautery is equally effective and by far safer.

### Discussion

**Dr. Hartford, Oklahoma City:** We must remember that advice had in the treatment of cases in the development of technicality for these cases is only to be taken into consideration for very serious cases. In unoperative cases we cannot expect to get as good results as when cases are taken early as the complications are a great deal more liable to occur. The point Percy made and the one we are considering is that the degree of heat used by the Percy cauterizer is the amount of heat that destroys the bad tissue and does not affect the good tissue. The heat should be controlled and that is what this treatment does. I think that we must give Percy considerable credit for this technicality, and the doctor in the paper mentioned one thing we do not consider enough and that should apply to the general man as well as to the laity, the early signs and symptoms of cancer. The early signs of cancer is the discharge, with hemorrhage. We should remember one thing, that serious hemorrhage in a woman's life is the sign of cancer.

**Dr. Riley, Oklahoma City:** One of the important things in connection with the



cancer of the uterus is where is your patient one year from today; two years from today; three years from today and five years from today. No operation should be considered that does not consider the future life of the patient. Many operations have been devised for cancer of the uterus and the patients have lived for awhile and their life terminated with a return of cancer in the pelvis. Last spring while at Ann Arbor I heard Dr. Peller discuss these operations. He said he had tried them all and when he reviewed his statistics; when he surveyed the results of his work, he was more convinced than ever that the only chance the woman had with a cancer of the uterus was the Wertheim operation. While it has a fearful mortality and in his early cases he was almost discouraged with this mortality, after a series of years he discarded all others and took to cauterizing. He said, though, that he had come back to the Wertheim operation and it was the only operation that gave a woman with a cancer of the uterus a chance of living longer, and that the future of that individual, after the Wertheim operation was the best of all he had used. If this is true, coming from a doctor like Dr. Peller, we should be careful in dealing with a treatment like this after that. Medicine is prone to follow facts, and perhaps some of the newer things that are coming up will prove to be incompetent when the statistics are taken up.

**Dr. Willour, McAlester:** No doubt the doctor is right in searching for the treatment that will give complete treatment. However, I have a case in mind that came from Arkansas. All the lymphatics were involved. She was in an extreme condition. I used a Percy cauterizer and I feel sure that it extended her life for a year or more, for she is still alive. I do not believe there is any surgical treatment that would have given that woman any chance of relief. I think my choice of operation would be a complete abdominal operation. I think, though, the heat gets some but do not think, however, that Percy cauterizer should be excluded, for I believe that if a patient's life can be prolonged we have done something.

**Dr. Grosshart, Tulsa:** The Wertheim operation, in my judgment, for cancer that is, operated from a standpoint of cure, is the only operation that should be used. The doctors preceding me have told you that the patient's recovery is not often. When they do they are cured, more than from any other at least. I agree with Dr. Willour that in advanced cases to cauterize will control your hemorrhage so that your patient will go on and probably recover to some considerable extent but will die with the cancer.

**Dr. Livermore, Chickasha:** In discussing cancer of the uterus we are still about where we have been ever since I have been doing surgery and results are about the same. On the whole we have not advanced like we should have advanced. One of the great things we must figure on is diagnosis of cancer of the uterus, not only to teach the laity but we, as doctors, must realize the importance of it ourselves. Our great majority of cancers of the uterus are advanced, and whatever method used our chance of recovery is small, but in all advanced cases they come in with cases of months, sometimes years, of treatment. The important part to bring out are the symptoms, which would be suspected of cancer. It is not the profuse flow that speaks of cancer in the early stages. There are many more things that do that but it is the spotting of blood occasionally on the clothes which the patient does not think much about, but a spot of blood between the menstrual periods, after the menopause, is one of the most alarming symptoms, much more alarming than the hemorrhage, for the hemorrhage may be due to some other condition. Most of the cases of cancer of the uterus will give that spotting of blood.

**Dr. Williams:** The early symptoms of cancer we all know. There are no symptoms of early cancer of the uterus, at least no symptoms I know of as a rule. The cancers that are operated on and from which we get our good records are those that are discovered early. The patient that comes to you with the symp-



toms of cancer; the blood discharge and foul odor are well advanced cases, and in these cases the operative procedure is patent. I think it should be a thorough removal if possible.

**Dr. Boyle, Enid:** It seems to me we are hardly discussing this paper of Dr. Berry's. There are few men, if any, now who do not know what we mean by the symptoms of cancer of the uterus. As Dr. Berry stated in his paper, we seldom get these cases while they are early cases, and I think a lesson for us is to teach the laity and others, and the question is whether or not Percy operation is not better and promises more to our patient than the Wertheim. The lesson for us to take home, is this better than the other operations we have been doing?

**Dr. Rhone, Elk City:** I am very sorry I did not hear that paper read, but I think I understand about what it contained. I think it is altogether where the cancer is located. If the cancer is in the abdominal fundus I think it is a great deal more difficult proposition than when it is in the cervix. I believe that is the turning point; that is the danger point of the cancer of the womb. You take the cancer of the fundus, I think it can be so patent that if you use the forceps you can almost pull it off. The cancer of the cervix is an altogether different proposition. It is richly supplied with lymphatics and I question the propriety of doing a complete hysterectomy.

**Dr. Berry, closing:** The gentlemen have brought out a point that I wanted to impress, and that is this fact, summed up in a few words. We want our patient to get out of the hospital alive, no matter what the final outcome is. We want to get that patient out with as few complications as possible. I mentioned the Wertheim operation incidentally, but I will call your attention to this fact, that a great many physicians have used this when it was not applicable. A great many have used it when they knew the cancer had gone beyond a curing point. Miscellaneous cases over the country show a mortality from 30 to 40 per cent. Personally my clinical material is not very large. I do not do over twenty or thirty hysterectomies in a year. I want my patients to get out of the hospital in the best possible condition. So far as recurrence, we do expect them to recur. The fact is that the old procedure of zinc chloride paste gave very good results, but they will recur. The fact is this galvano-cautery is very heavy; it gives good results and I believe the patient lives just as long as with the Percy, and not many have the surgical skill to do the Wertheim.

---

### FRACTURE OF THE CLAVICLE.

W. Kelton, Seattle (*Journal A. M. A.*, June 16, 1917), describes and illustrates a crutch splint devised by himself for a case of fracture of the clavicle where the Velpeau, Sayre and other methods could not be well used on account of the nature of the injury and the suffering of the patient. The apparatus is illustrated, and its advantages are summed up by him as follows: "1. Most important of all, it is comfortable, and free from the almost intolerable suffering caused by other dressings. 2. It can be used in many cases in which the Sayre and Velpeau dressings cannot be applied. 3. It can be used innumerable times. 4. It can be adjusted to any adult physique. 5. It is inexpensive. 6. It is easily applied, and cannot be worked out of place by the patient as are the Sayre and Velpeau dressings, on account of their discomfort. 7. There is no chafing of the skin, the parts are open to inspection, and the apparatus can be easily removed and the injured parts massaged. 8. It allows free use of the forearm and hand. 9. It applies the proper mechanics, meets all the cardinal requirements and affords perfect immobilization."

## GOITER.

CHARLES R. PHELPS, M. D., Oklahoma City, Okla.

It is not my purpose to enter into an exhaustive discussion of this condition but rather to give a brief outline of some of the observations picked up during a recent trip to Eastern clinics. There is quite a bit of difference of opinion as to the real cause of goiter and in just what way this condition produces such extensive destruction to distant organs such as the heart, liver, kidneys, etc.

Goiter does damage in two ways: by pressure or by intoxication. The goiter which does damage by pressure must do so by an enlargement of the gland, thus pressing on neighboring parts. The goiter which does damage by intoxication may or may not be enlarged to any great extent. Therefore, you may sometimes overlook this kind if you always look for enlargement of the gland.

A very large gland may be only mildly poisonous, while on the other hand, a comparatively small one may be intensely so, or on the same plan that a drop of one poison kills where it takes a cup full of another kind.

The thyroid gland is supposed to manufacture a certain amount of some substance, that is distributed through the system by the circulation, and is held by many to be the balance or to equalize in keeping balanced the different organs. Then when this secretion becomes too much or perhaps too little the balance of these organs is disturbed or lost: hence, as in a case of toxic goiter, you get a run-a-way heart, diarrhoeas, exophthalmos, derangement of nervous system, etc. Why all this? Simply because the balance has been taken away or control lost.

While I realize this may not meet with the approval of all who may read these lines, it looks to me to be as reasonable as any other theories advanced on this subject. It is, however, claimed by some who have investigated quite extensively, that there is never an over-secretion, but always a lessened amount. Which ever way this may be, we know that this is a progressive disease, which many times comes on slowly, like a thief in the night, breaking down the heart muscle, destroying the central nervous system, and injuring beyond repair many other organs of the body. Therefore, it is important that the true condition be recognized early, and relief obtained before the damage, not to the gland itself, but to organs above mentioned, is beyond repair. Sometimes the gland itself becomes inert, or, in other words, burnt out, having no function whatever, but due to the destruction of other organs, which is very extensive; a case of this kind is practically hopeless from a medical or surgical standpoint. Therefore, I would point out the importance of early treatment of these cases.

Regarding the cause of goiter, the lack of iodine plays an important part in this condition. It is a well known fact that the thyroid contains a much greater per cent of iodine than any other tissue in the body. Therefore, when there is a lack of iodine in the body and the thyroid gland is exposed to a sudden strain, such as helping to increase the system's resistance to withstand infection or mental anxiety, grief, anger or fright, it will enlarge and produce what is known as goiter.

Goiter seems to be more prevalent in some certain sections of the country than others. The explanations advanced are as follows: At the sea level where there is an abundance of iodine, goiters are scarce. In mountainous regions where the supply of iodine is short, there is an abundance of goiters. This is also noticed in the Great Lakes basin, where a percolation of water through the soil for a long period of time has bleached out or taken the iodine which it contains.

As before mentioned, the proposition simmers down to this: In localities where there is an abundance of iodine the body and thyroid is kept well supplied with this necessary substance, and where an undue strain is placed upon the gland by any of the causes above mentioned, there is enough iodine reserved to tide over. In localities where there is not a sufficient supply and the body is short in this substance, the thyroid hypertrophies or enlarges due to the extra endeavor or over-work to secrete and the condition known as goiter results.

It is claimed by feeding children a small amount of iodine at long intervals in localities where goiter is prevalent, the condition is prevented, but on the other hand the giving of iodine to persons already affected with goiter does not seem to give much relief and many times aggravates the case.

In dealing with goiters clinically, we divide them for convenience sake about as follows: Toxic, or poisonous, goiters and non-toxic, or non-poisonous, goiters. Toxic goiters may be (1) true exophthalmic goiters, and (2) simple toxic goiters, which are causing damage. Non-toxic goiters may be simple goiters that are not causing damage and apparently not liable to, and (3) simple goiters which, from their size, location and growth, are liable to cause trouble, and (4) those which are already causing trouble from pressure, obstruction, etc. We also have inflamed goiters and malignant goiters, but these are comparatively rare.

Symptoms: As a simple, non-toxic goiter can be diagnosed by any physician by simply noting the enlargement of the gland and any symptoms that may be produced by pressure and obstruction to neighboring parts, we will pass to the toxic or exophthalmic kind, or that kind which seems to poison the patient, and right here I want to again emphasize the fact that a high degree of intoxication may result from a goiter so small that it might be passed unnoticed by the inexperienced, unless due attention is paid to the symptoms produced by this condition.

First, we have cerebral stimulation. The patient becomes very nervous and seems to be keyed up to a high state, as if under pressure. There is an easy blushing of the skin "vaso motor disturbances" with a certain amount of sweating. There is a tremor or fine trembling of certain parts; the patient becomes irritable and cross, many times hard to get along with; the heart becomes rapid (tachycardia) and as the disease progresses, runs up to 150 or 160 beats per minute and sometimes more, dependent upon the amount of intoxication; there is a loss of strength, patient complains of feeling weak, and as the disease progresses, the eyes assume a peculiar staring look (exophthalmos), the bowels become loose, alternating with constipation, and if relief is not obtained, vomiting, jaundice and death results.

These are about the usual symptoms in a case which is allowed to continue without treatment or interference of some kind.

Now, regarding the treatment. It is necessary first to carefully go over the case and determine the condition with which you have to deal, such as the extent of destruction to distant organs, the amount of resistance the patient has, length of time of disease and note all abnormal conditions. A burnt out goiter, which has not the power to do further harm, had best be left alone and repair made to the destruction which has already happened to the heart, liver, kidneys, and other organs, if this be possible.

In a certain proportion of cases, such as happen in young women, when taken early, can be restored to a fairly normal condition by rest, applications of the ice bag, sedatives, tonics, the right diet, a quiet life, and cutting out all things that produce strain and worry. As these cases do not produce any particular symptoms, except enlargement of the gland, it is not often they come to a physician for relief, but whatever the condition may be and whatever treatment is instituted, these rules should be followed, as upon them a certain amount of your success will depend.

Avoid all excitement, get plenty of rest, eat and drink nothing that excites the nervous system, avoid meat, drink plenty of boiled water, milk, buttermilk and fruit juices. Eat cooked fruits, eggs, bread and butter, toast, rice, cereals, cooked vegetables and ripe fruits. Take a nap in the afternoon, get plenty of fresh air and live a quiet life.

An injection directly into the gland of certain substances in experienced hands is one of the best agents for relief we have today, but the cases must be selected and worked out according to their individual needs. Boiling water in the hands of Doctor Wyeth and Porter is highly spoken of. Injections of iodine or iodine and glycerine, also serums and other substances have their followers. To Watson,



formerly of this city, but now of Chicago, belongs great credit for his investigation and research work along these lines. His injection of quinine urea is to my mind and to my observation of probably fifty cases during the past year, the safest and most satisfactory treatment outside of removal that we have today, always remembering that it should be used by one experienced as to the technic.

Dr. Crile, of Cleveland, Ohio, who probably handles as many cases of goiter as any other one man in this country, told me while on a visit to his clinic a short time ago, that he was using injections of quinine urea directly into the gland in a certain class of cases with quite a bit of success in reducing the intoxication, and preparing the patient for operative procedure.

The solution should be of proper strength and a certain amount should be injected into the gland rather deeply at intervals of two or three days, or as indicated by condition of patient. These cases should also receive the proper kind of rest, diet and relief from any kind of worry or mental strain.

If it becomes necessary for surgical interference, the gland can be removed with comparative safety, the mortality rate being about 1 per cent in fairly well selected cases. For technic I refer you to any standard work on surgery.

Regarding the anaesthetic, there is a wide difference of opinion. Some prefer local, and the removal can be done by this method very nicely. Others use ether by the drop method. Still others, nitrous oxide and block field with one to four per cent novocain solution. Oschner, of Chicago, gives a general anaesthetic with ether, getting the patient well under; then elevates the head of the table, lowering the foot, and gives no more anaesthetic. The patient will remain asleep about forty-five minutes, due to anemia of the brain, which is ample time for removal of the gland.

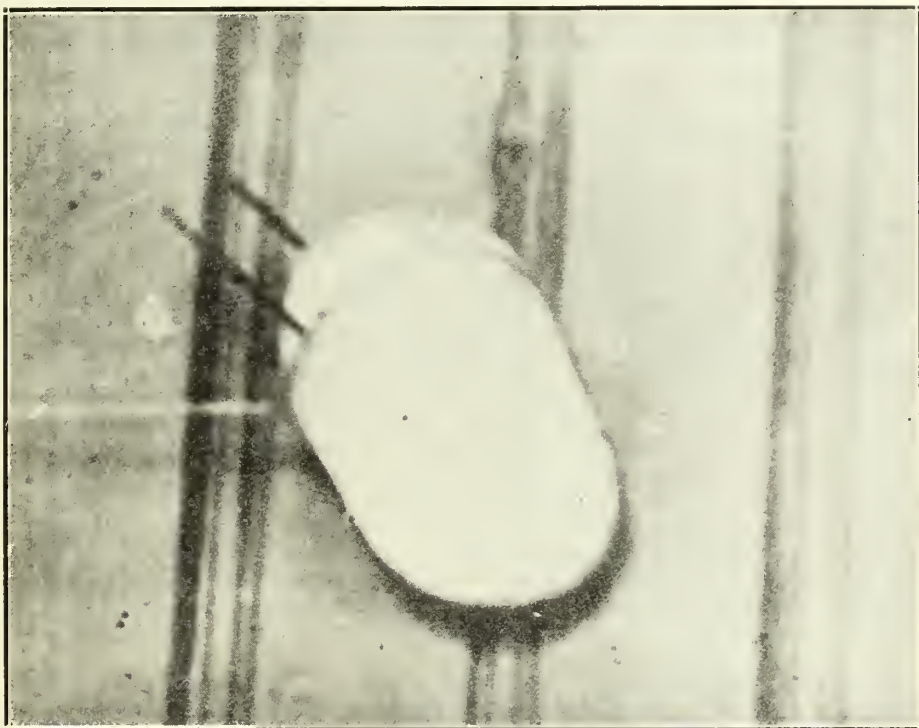
### PROSTATIC ABSCESS.

Two cases of prostatic abscess recently under his care stimulated J. S. Eisenstaedt, Chicago (*Journal A. M. A.*, March 17, 1917), to study the etiology and treatment of the disorder. It is surprisingly infrequent when we consider the number of cases of gonorrhea involving the prostate. Its etiology is interesting, as in certain cases the entrance of the infection cannot be determined and may be some instances be remote from the genito-urinary tract. Venereal infection is the most common cause, however, and there is usually a definite history. Eisenstaedt passes over the older methods of drainage through the rectum as unsurgical and considers only perineal drainage as recommended by Dittel, Thompson and Zuckerkandl. Their technic has, however, the disadvantage of cutting through the central tendon of the perineum and often destroys the patient's ability for erection and ejaculation. He offers the following modification for the method as preferable: "1. Skin incision concave between the two tubera ischii, the concavity directed toward the rectum at the middle of the depression-retrobulbaris, usually about 3 cm. in front of the anus. 2. Division of the often rather thick subcutaneous tissue and fat, exposing the superficial muscles and the central tendon of the perineum. 3. Entrance to the prostatic capsule, gained by dissection to one side or the other of the median line, as indicated by findings of rectal palpation. The fascia and transversus perinei muscles, superficial and deep, are elevated and held by small retractors; and then by the splitting of the fibers of the levator ani in their long axis, the rectovesical layer of the pelvic fascia comes into view. This and the prostatic capsule then may be readily incised and drainage established. It is well to explore thoroughly with the finger and break down, if necessary, any fibrous septa so that the entire part involved may be thrown into a single cavity and thoroughly drained. For drainage a large caliber, soft rubber tube is best for the first twenty-four to thirty-six hours. After its removal, packing with sterile or iodoform gauze strips are most satisfactory. The drainage will last usually from three to four days, when the packing may be gradually withdrawn." Eisenstaedt objects to the method of Guiteras and others of incising the prostate through the urethra with a guarded bistoury after perineal section, which has the disadvantage of not being under the vision of the operator, and of leaving a urethral fistula.

**STONE IN BLADDER: CASE REPORT.****DRS. RAMSEY and McCLURE, McCurtain, Okla.**

We wish to report the following unusual case:

Carrie G; female, age 20, single. Had suffered from bladder trouble for two years and spent the last six months in bed most of the time. Introduced steel sound into bladder and diagnosed stone. Did suprapubic lithotomy. Found stone (oxalate of lime) measuring 2x3 inches and weighing  $3\frac{1}{4}$  oz., imbedded in right wall of bladder. An ordinary black steel hair pin was enveloped in the stone, with the points of the pin exposed and pointing to the neck of bladder.



On lifting the stone from its bed a large quantity of pus and blood escaped. Interior of bladder was cleansed and bleeding controlled by hot sponges. A rubber tube, covered with gauze and oil silk, was stitched to lining of bladder with small plain cat gut and wound closed close around the tube all the way out. Drain removed on fifth day and a self retaining female catheter introduced through urethra and patient kept flat of her back till abdominal wound healed. Patient had had rigors and fever for two or three weeks before operation and complained of pain in and around rectum. Opened and drained a deep ischiorectal abscess. Quick recovery and patient is well and weighs more than she ever did. The wall of the bladder was about the thickness of an ordinary shoe sole and its capacity was about 2 ounces at time of operation. Extreme pain was experienced at each effort to urinate, caused by the points of the hair pin piercing the inflamed mucous membrane of the bladder.

## PROCEEDINGS OF ST. ANTHONY'S CLINICAL SOCIETY.

DR. A. A. WILL, Pres. DR. LEILA E. ANDREWS, Sec.

Oklahoma City, April 16th, 1917.

**Case 1. Tetanus**, presented by Dr. John W. Riley, with the following history and comments:

Hospital number 16158. Male, colored, 19 years of age. Family history negative. Personal history, measles and whooping cough, otherwise negative. Present illness: Was shot in lower anterior left thigh 14 days before admission. At the time of the injury the wound was probed by a physician; ten days after the injury he began to have jerky pains in his left thigh; 13 days after the injury his jaw began to get stiff and this continued to increase until he was unable to eat. He had marked profuse sweats, muscle spasm, pain and rigidity of left lower limb.

**Physical Examination:** Patient has a well marked rigidity of the neck, back, abdomen and left leg. He is unable to put his chin on his breast, he is able to partially open his mouth, is able to move his right leg and both arms. Passive movement of arms and right leg show stiffness and impairment of motion. Reflexes decreased and absent at times. He has attacks of muscle spasm associated with marked pain and at these times the jaws are firmly closed. His tongue shows evidence of having been chewed. Temperature 102.4, pulse 100, blood pressure 126-80. The muscles of the abdomen and left lower limb are contracted and board-like to palpation. He evacuates the bowels and the bladder voluntarily.

Urine 1040, alkaline, and generally negative. Blood H gb. 80, R. B. C. 4,910,000, W. B. C. 12,200, P. M. N. 81, L. 17, L. M. 1, T. 1, Wassermann negative.

Before admission he had received two doses of 15,000 units, and one dose of 3,000 units of antitetanic serum subcutaneously. On admission a lumbar puncture was made but no spinal fluid escaped, and 10,000 units of antitetanic serum was injected around the cord, and 10,000 units was given intravenously. The next morning a similar amount was given. The patient appeared better and was not suffering as much. The next day 10,000 units was given intravenously. The next day 10,000 units intravenously. The patient appeared much improved and was quite free from pain, although his rigidity was as marked as at first.

X-ray showed the bullet on the anterior lower middle third of the femur. Eight days after admission an incision was made, and the bullet and tissue surrounding it removed. Culture of these structures did not show tetanus bacilli. The wound was packed with gauze.

At this date, two months after his infection, patient has entirely recovered and is able to attend to his regular work. This is a case limited to one extremity.

Two toxins have been demonstrated in tetanus: a—Tetane spasmin, which is neurotoxic and has a great affinity for the central nervous system and is responsible for the symptoms of tetanus. b—Tetane lysin, which is thermolabile and hemotoxic.

**Pathogenesis:** a—It is a local infection characterized by general toxæmia. b—Bacilli and spores remain at the local site and are not distributed through the tissues. c—Bacilli produce powerful toxins. d—Blood contains the toxins. (Neisser produces tetanus in mice by giving blood of tetanus patients.) e—Toxin.

a 1—It is rapidly absorbed into the blood and lymph streams.

b 1—It reaches the central nervous system through absorption of end plates of motor nerves.

c 1—Absorption most likely occurs along motor nerves.

d 1—Absorption occurs along the lymphatics of nerves and not the axis cylinders, is the generally accepted view. (Fiel, Cermovodeau, Henri.)

e 1—Toxin although in blood stream does not enter the central nervous system from blood vessels, but through end plates or lymphatics of motor nerves.

f 1—Ascends centripetally along the motor plates and lymphatics and



reaches the motor spinal ganglia on side inoculated. It then effects the ganglia on opposite side, and produces hypersensitiveness and rigidity. It then effects the nearest sensory apparatus and increase of reflexes when part is irritated.

g1—Toxin continues to ascend and effect more and more motor centers and neighboring sensory apparatus. This leads to spasm of all striated muscles. (General reflex tetanus, Park).

There is always a period of incubation regardless of the severity of infection. The greater the wound, the heavier the infection, and shorter the period of incubation. Acute tetanus under 10 days and chronic tetanus much longer. Toxin is produced and absorbed during, or soon after, the first 24 hours of the infection. This explains the necessity of early administration of the serum.

Action of Tetanus Antitoxin: a—Neutralizes free toxin, similar in some respects to an acid and an alkali. b—Generally believed as soon as a molecule of antitoxin unites with a molecule of toxin, the toxin is rendered inert, although it may be possible for the molecule of toxin to become disassociated from the molecule of antitoxin and attack the nerve cells or unite with another molecule of antitoxin. This shows the necessity of having an excess of antitoxin. When the toxin molecule becomes united with nerve cells, it is extremely difficult or impossible for the antitoxin to effect its neutralization. Hence the great value of antitoxin lies in prophylaxis.

The Value of Antitoxin in Tetanus: a—Neutralization of all free toxin, as quickly as secreted and before absorption by the nervous tissue. b—Actual disassociation or neutralization of toxin loosely united with nerve cells, or suspended in lymph after it has left the capillaries and before it is taken up by the nerve cells. c—Antitoxin probably contains anti-aggressins or bacteriotropins. These aid phagocytosis in overcoming the repelling chemotactic influences and neutralizing toxins which impairs leuco-toxic action and permits the leucocytes to engulf and destroy the bacilli.

Method of Administration: a—Subcutaneous route, slow and not dependable. Maximum quantity of antitoxin not found in the blood for 24 hours after administration. Should be chosen for prophylaxis and not be relied upon for treatment. A smaller amount subdurally or intravenously is quicker and better. b—Intramuscular preferred to "a"—may be used to supplement subdural or intravenous. c—(1) Causes a rapid neutralization of toxin free in the body fluids. (2) Give 10,000 to 20,000 early. (3) May succeed in neutralization of a loose association of toxin with the nerve cells. (4) Always worth trying. d—Subdural route—Penning, Park and Nicoli have shown conclusively that it is the most efficacious and valuable avenue to administer antitoxin. Given by the gravity method and found better to dilute with salt solution to insure dissemination. Should give less than the fluid withdrawn. In dry tap give from 3 to 5 cc. safely.

Reason for Administering Antitoxin Subdurally: a—Neither the central nervous system nor peripheral take up antitoxin from the blood stream (Park). b—Only traces of antitoxin found in the spinal fluid after administering large doses of antitoxin intravenously. c—Animals passively and actively immunized may be rendered tetanic by injecting toxin into the nervous system or a nerve. d—When antitoxin is administered subdurally, it passes over into the blood stream. e—Intraneural advised by Ashurst and Johns.

Prophylaxis of Tetanus: a—Antitoxin is the most successful prophylactic treatment and exceeds in value even the antitoxin of diphtheria, but therapeutically far inferior because of union of toxin with nerve cells. b—Tetanus bacilli may be harbored in an old wound and cause no symptoms until an additional injury or general disturbance of the body causes the normal protection to be broken down. This theory is responsible for an otherwise inaccountable development of tetanus. c—Prophylactic dose is better given intramuscularly or intravenously. Give first dose at time of injury. Second dose in one week. Third dose in two weeks. Knorr found only one third of antitoxin administered at the end of six days, and only 1-50 at the end of the twelfth day. Hence the necessity of giving

more than one dose, in order to have it available at the end of two or three weeks. There is little danger from serum sickness.

Treatment of Tetanus: a—Must give several times the protective dose of antitoxin. b—Must be injected within a short time, 24 to 36 hours after onset. c—Has reduced the mortality from 80-85 to 60-65 per cent. d—Give maximum dose as soon as possible. e—Give 10,000 to 20,000 units intravenously and repeat in 18 to 24 hours if no effect apparent. Give 3,000 to 5,000 subdurally and repeat every 24 hours. Inject 500 to 1000 units into nerve trunk involved.

Results of Antitoxin Treatment of Tetanus: a—Has reduced mortality 20 per cent. b—Will give better results when better administered. c—Pennin (Denmark) shows: 199 cases not receiving antitoxin, 21 per cent recovered. 189 cases receiving antitoxin, 42.3 per cent recovered. 92 cases incubation period less than 10 days, receiving antitoxin, 22.4 per cent recovered. 94 cases incubation period less than 10 days, not receiving antitoxin, 5.3 per cent recovered. Irons (America) reports 225 cases from 1907 to 1913. Those receiving antitoxin, 61.77 per cent died. Those not receiving antitoxin, 85.7 per cent died. 57 cases with small doses of antitoxin, 3,000 units or less, 73.7 per cent died. 143 cases with large doses of antitoxin, 3,000 units or more subcutaneously or 3,000 units or less subdurally, 57.3 per cent died. He reports 18 cases in which magnesium sulphate with antitoxin was given; four recovered and 77 per cent died.

The treatment of tetanus should be: (1) Excision and cauterization of the wound. (2) Early and large doses of antitoxin subdurally and intravenously. (3) Control of the pain and spasm. (4) A superlative degree of elimination.

**Case 2. Aneurysm of the Aorta**, presented by Dr. John W. Riley. The man, aged 58, exhibited a most interesting picture of the disease, resulting from an untreated syphilis of twelve years standing. He showed characteristic blood and arterial changes. He will be placed on salvarsan and mercury.

### HEART DISEASE.

H. Sewall, Denver, (*Journal A. M. A.*, June 2, 1917), says that, just as civilized mankind harbors almost constantly a more or less latent tuberculosis, so infective disease of the heart provoking no classical symptoms but potential for catastrophe is well nigh invariable at some period of life. The proof of this can be only established by years of research but there is sufficient evidence to warrant its use as a working hypothesis. Darlington has given statistical evidence that the mortality rate from heart disease is increasing throughout the United States while the general death rate is decreasing. Sewall bases his thesis on the incompleteness of the evidence offered by physical signs of the organic condition of the heart. Necropsy records, including microscopic cultures of the cardiac tissues, must furnish the crucial evidence of the existence of heart lesions, and at present the clinical diagnosis are absurdly insufficient. Granting a focus of infection in the heart, the teachings of the new science of immunology must lead us to suspect that the vital reactions of the cardiac tissues must be profoundly modified. Even the present crude data point to the conclusion that heart tissue so attacked becomes as it is said "sensitized" to a particular form of poison with which it is inoculated, and therefore abnormally receptive of new accessions of the same poisoning and susceptible to them. The clinical facts, he says, supporting this rule are numberless and nothing, he thinks, could be more fruitful for good than for the student of disease to estimate the "field of physiologic response" in the hearts of his patients. A number of examples of rapid cardiac disease are given. Another point of contact with tuberculosis is the period of early youth at the time of primary infection and he says that one whose ear is trained to recognize the *lub-dup* of the normal organ in youth can notice the changes in heart signs of most adult persons. A really efficient test of cardiac efficiency involves a study of blood pressure and the state of vasomotor coordination by comparing blood pressures in the recumbent and erect postures and he gives a number of points to be noticed in cardiac examinations. In chronic cases, which are apt to be overlooked unless previous infection has caused further valvular trouble, he thinks we cannot do better than to act on the hygienic hints from our hard won experience with tuberculosis.

# JOURNAL OF THE OKLAHOMA STATE MEDICAL ASSOCIATION

VOLUME X

JULY, 1917

NUMBER 7

PUBLISHED MONTHLY AT MUSKOGEE, OKLA., UNDER DIRECTION OF THE COUNCIL

DR. CLAUDE A. THOMPSON, EDITOR-IN-CHIEF

ENTERED AT THE POSTOFFICE AT MUSKOGEE, OKLAHOMA AS SECOND CLASS MAIL MATTER, JULY 28, 1912

THIS IS THE OFFICIAL JOURNAL OF THE OKLAHOMA STATE MEDICAL ASSOCIATION. ALL COMMUNICATIONS SHOULD BE ADDRESSED TO THE JOURNAL OF THE OKLAHOMA STATE MEDICAL ASSOCIATION, BARNES BUILDING, MUSKOGEE, OKLAHOMA.

The editorial department is not responsible for the opinions expressed in the original articles of contributors.

Reprints of original articles will be supplied at actual cost, provided request for them is attached to manuscript or made in sufficient time before publication.

Articles sent this Journal for publication and all those read at the annual meetings of the State Association are the sole property of this Journal. The Journal relies on each individual contributor's strict adherence to this well-known rule of medical journalism. In the event an article sent this Journal for publication is published before appearance in the Journal, the manuscript will be returned to the writer.

Failure to receive the Journal should call for immediate notification of the editor, 507 Barnes Building, Muskogee, Okla.

Local news of possible interest to the medical profession, notes on removals, changes in address, deaths and weddings will be gratefully received.

Advertising of articles, drugs or compounds not approved by the Council on Pharmacy of the A. M. A. will not be accepted.

Advertising rates will be supplied on application. It is suggested that wherever possible members of the State Association should patronize our advertisers in preference to others as a matter of fair reciprocity.

## EDITORIAL

### LEST WE FORGET, 1898.

Dr. Victor C. Vaughn in *The Journal of Laboratory and Clinical Medicine*, May, has something pertinent to say with reference to conditions applying to troops and medical officers during war, which should have the grave consideration of every physician, politician and lawmaker at this time.

Dr. Vaughn quotes at length from the experiences of 1898, and especially finds fault with the fact that medical officers are so often under line officers and that the Medical Department has no general officer or officers as other departments have, which results or may result in a reasonable safeguarding order being disregarded or carried out in such a manner as to nullify the good effect intended. He cites a piece of evidence taken in an official hearing in which an officer of high rank testified, in effect, that he saw nothing wrong with that well water, he had drunk it often and that the medical officer ordering its discontinuance was troublesome, etc. The water, however, supplied its quota of typhoid patients and of course its quota of deaths, simply because a "scientific" line officer knew more about sanitation and bacteriology than the medical officer.

At the beginning of every war, it has been pointed out from the experiences of other wars that the death rate was higher from disease than wounds, while this has materially decreased in favor of shrapnel and torpedoes in modern war, there are still many factors that must be remembered. Typhoid and tetanus have lost some of their terrors lately on account of vaccination and prophylaxis, but the infected well still has the power of producing dysentery. Paratyphoid was a small factor with our border troops, measles was no small enemy, as were other of the often so-called harmless infections.

History records some facts peculiar at first glance, but sanely reasonable after a moment's consideration, in the study of wars and their results.

\*Councilman says that the total loss of the Germans in the Franco-Prussian War from wounds and disease was 43,182, while at the same time there occurred

\*Disease and Its Causes, 1913.



129,182 deaths from smallpox in Prussia. We had in the Spanish War 20,178 cases of typhoid with 1,580 deaths. In the Boer War the British troops had 31,118 typhoids with 5,877 deaths and 5,149 deaths from other causes, while only 7,582 were lost in battle. These are the experiences of all wars, but the significant thing for us to remember now is that while the British were losing 5,877 men from typhoid, "other causes" exclusive of wounds, produced 5,149 deaths. The "other causes," in the main are still with us, and they must be guarded against by our medical officers. Certainly that cannot be successfully done in every field our troops will soon invade, if the medical officer is to be hampered by the opinions and orders of some obstinate, self-opinionated line officer, who thinks he knows better what to do than a trained sanitarian.

It is to be hoped that we will not repeat the unnecessary errors of the past. Nothing would be so conducive to success from a medical standpoint in this war than to separate at once the departments and place under the exclusive control of the medical officer all things medical. Lord Northcliffe states that of all departments undergoing strain and breakdown in the British Army, the Medical Department was the one bright spot reflecting credit on all concerned and that that department was more ready to meet and did meet its problems better than any other.

---

### THE NEW YORK MEETING.

From the standpoint of a large city it was a success, for New York is the largest city the world has ever known. Considering the scientific exhibit, which by the way was seen by relatively few of the attendants, it was the best ever held. Many days could have been profitably spent in studying that exhibit alone. The management of registration and commercial exhibits, which latter were larger than ever before, was splendidly handled, for that was in the hands of the office force of the A. M. A. who are past masters in handling the annual meeting.

The scientific meetings were probably good, but they were so scattered that the provincial visitor wore himself out trying to find his way from one to the other. In that respect no city will probably exceed the mark set by the San Francisco entertainers who housed all sections and exhibits under one roof.

The registration was not as high as one would expect in a meeting held in the metropolis of the world. New York has more than six thousand physicians, yet the registration from the city and all other places ran very slightly over five thousand.

There was everywhere evidence that we are at war. Uniforms, not only of our own medical officers, but occasionally English and Canadian Army and Naval officers were to be seen, giving the meeting a decidedly different aspect from others of peace times.

There seems to be a very general impression that New York City is not a good place for a meeting. In the first place the New Yorker is notoriously self sufficient unto himself; the rest of the country is a mere appendage to the City from his viewpoint. The Murphys, Mayos, Matas and Horsleys are tolerated small episodes, largely regarded merely as second-niners; in fact so wrapped up are they in their own conceits that they do not realize there is much else to the United States outside of Manhattan Island.

The entertainment features were a disappointment, in fact they were a blank, there were none. Compensating for that somewhat, was a patriotic meeting at the Hippodrome attended by several thousand people. Addresses were made by John Purroy Mitchell, Mayor of New York, Dudley Field Malone, President George E. Vincent, a delightful speaker and head of the Rockefeller Foundation, who formerly as head of Minnesota University welcomed the meeting at Minneapolis, and Colonel Theodore Roosevelt of Oyster Bay, Africa and the River of Doubt, who still maintains an unmistakable hold on the affections of the people.

Colonel Roosevelt said he was tempted to accord to our profession the appellation of "greatest" of all professions, that he was glad to speak to so distinguished a body. "But I would be much gladder if I were too far away to speak to you," for that he was given another ovation. Flaying the undutiful seems to be one of the Colonel's accomplishments also, for he used his effective English unsparingly in paying his respects to the "Conscientious Objector" who lives in this country, enjoys a freedom of action and living unknown to any other, yet "conscientiously objects" to do his duty as a citizen of the Free Republic. "Curtains his cowardice behind the statement that he objects to placing himself in a position where he might take part in killing some one," said the Colonel: "I'd guard his conscience. I'd send him to the front, but I wouldn't give him a gun. I'd put him to digging kitchen sinks and trenches so that good men could rest until the time came for them to kill some one." He closed by appealing to the doctors of the country to do their part by upholding the flag of the free and the brave, the symbol of democracy throughout the world.

Mme. Frances Alda and the Metropolitan Opera Chorus sang "Rule Britannia" "La Marseillaise" and the "Star Spangled Banner." Sousa's Band, always noted for its stirring and patriotic music, rendered many selections fitting to the occasion.

Lack of space prohibits inclusion here of the addresses, which were all to the point that the medical profession has much to do and voiced the sentiment that we would not be found wanting.

### DO YOU COME UNDER THIS HEAD, DOCTOR?

The New York meeting of the American Medical Association brought to light some facts until then not generally known, facts not pleasant to have to face, nevertheless true.

Dr. Franklin H. Martin, Chairman of the Medical Section of the National Council of Defense, in an address before the general meeting stated that we are woefully short of the needed number of medical men to adequately care for the thousands of new troops soon to be placed in the field, that our allies need physicians as never before and that the response to these needs has not been nearly as prompt as hoped for, that of the 8,000 young physicians who had been examined after application for commissions fewer than three thousand had accepted the commissions offered them. He warned his hearers that if the younger physicians did not offer their services they might soon expect, if they were within the age of draft, to find themselves drafted and in a year possibly digging trenches in France. "If you are a member of the Medical Reserve Corps, for God's sake go home and accept," he appealed. "If you are not going to accept, go home and say that, so we down in Washington may know what we are up against."

Dr. Martin stated that the first request Mr. Balfour made was for one thousand physicians for England and a like number for France. It is said that rural England is stripped of doctors below the age of 54. What seems to be a wise suggestion from Dr. Martin was that physicians should be sent directly to France to receive their training there instead of waiting for training at home. This latter suggestion should be carried out, for many physicians dread the possibility of having to undergo what seems to them an unnecessary training while their personal affairs are being neglected, and it seems reasonable that while receiving the training immediately near the field of action much good would be done them and quicker, as they would be in position to familiarize themselves with the language, customs and rules in vogue.

Doctor, if you can do so at this time, you should offer your services and accept the assignment given you. This is certainly no time for parleying and speculating. The day of postponement is over. We have this situation to meet and it should be met with the spirit and patriotism in keeping with American Ideals.

### BEWARE OF FAKE SALVARSAN AND NEOSALVARSAN.

The New York City Board of Health at the A. M. A. meeting had on display an exhibit of spurious salvarsan and the real article, the fake being so cleverly gotten up, that no one could detect the counterfeit except by chemical examination. This no doubt accounts for the occasional small offerings of this product by "boot-legger" druggists and fly-by-night traveling men, who call the physician up and offer a few doses at fabulous prices.

We again call attention of our readers to the danger of using any product not put out by a house of respectability and honor. The Farbwerke-Hoechst Company's agent in New York attempted to handle the salvarsan situation as best they could and equitably, in that they sold only to physicians, cut out all middlemen and restricted the buyer to his apparent needs based on his previous orders. They bought occasional lots of arsenobenzol from Schamberg and Kolmer and were as satisfied with that product as with their own and rightly so; for a time Schamberg produced and sold direct to physicians and now Mr. Metz announces the preparation at an early date of both salvarsan and neosalvarsan in the United States, at the usual low prices. So we urge again, beware of the fake salesman and the ignorant scheming druggist who calls you up and offers a product that he cannot possibly obtain except by deception and fraud or which is a fake.

### THE PASSING WAR HYSTERIA, ROTARIANS OFF ON THE WRONG FOOT.

Perhaps it is to be expected in a Republic where everyone thinks he can manage the war better than war experts; where every crank and Moses has a plan superior to any yet advanced, but for downright rot and drivel, unsupported by either facts or common sense a circular recently issued by the Secretary's office of the International Association of Rotary Clubs comes perilously near to libel, certainly to the gratuitous insult of brave men, among our Allies,

Sections of the statement read as follows:

"More Allied soldiers on the Belgian-French line have been incapacitated through venereal disease than through gun-shot wound."

"One man out of every three now on that front is believed to have lost time from active service through venereal disease."

"Statements no less appalling have been formally presented to the English King by a special commission."

"Such conditions have reduced efficiency and outraged decency in every war of history—not excepting those fought by troops of the United States."

The statements further say that "In the camps along our Mexican border \* \* \* 11.2 to 20.4 men out of 100 registered themselves as having patronized houses of prostitution every month," that in other camps where the men were encouraged to keep themselves clean "less than 4 men, in another 1 man, out of every 100 registered themselves as having patronized houses of prostitution every month."

The above statements are so clearly at variance with the experience of American Surgeons who have been in France, so improbable of being true, that it is a wonder some one who knew something of conditions was not consulted before they were made.

Dr. Geo. McLean, Oklahoma City, who was stationed with the 23rd British Expeditionary Hospital, Etapes, France, states that the highest number of venereals received in one convoy was thirty out of 450 men, a convoy of one hundred and fifty would scarcely ever have more than ten, fifteen men at the most. One



ward of 29 beds, in a hospital of 940 beds was kept for these cases and this properly cared for syphilites and some of the acute skin diseases as well.

Another well known man in position to know something of such matters calls "Some of the matter as misinformation."

Now comes Major Goodwin of the British Medical Department discussing another phase which has been heralded far and wide by a yellow press, and misinformed organizations of enthusiastic cranks—the supposed high death rate of army surgeons—Major Goodwin states that 60,000 surgeons have not lost their lives, that 12,000 was all they had and that the loss was less than 2 per cent.

The benevolent censorship established at Washington should put a muffler on the people responsible for the dissemination of misinformation.

## CURRENT MEDICAL LITERATURE

Conducted by

DRS. CURT von WEDEL, Jr., and L. J. MOORMAN, Oklahoma City  
and FRED J. WILKIEMEYER, Muskogee

### ANNALS OF SURGERY, MAY.

The May Annals of Surgery offers a wealth of work in commemoration of Paul W. Pilcher. One of the most notable articles of this group is the Problem of Prostatic Obstruction by J. H. Cunningham Jr., of Boston.

Cunningham insists upon careful pre-operative study and preparation of the patient, believing that by an accurate knowledge of the thalein output, by the amount of retention, etc., one can fairly accurately prognosticate a case.

As to the choice of treatment, there are operative and non-operative cases, although the non-operative cases are relatively small. Non-operative cases include those individuals whose general impairment is such that they could not stand the tax; individuals with advanced carcinoma of the gland but who are still able to be catheterized; cases of retained prostatic secretions and secondary congestion.

The operative class of patients may be divided into radical and non-radical cases. Non-radical cases are those whose resistance is below the standard required for radical removal. One may use galvano-cautery operation of Bottini. Radical operations may either be supra-pubic or perineal. While it is true that the supra-pubic method carries a slightly higher mortality, a more satisfactory result is obtained; consequently it should be more apt to be the method of choice. In bad risks one should either use the two-stage operation or prolonged washing with retained catheter until urine is clear.

Post operative complications. The local are hemorrhage, wound infection, phlebitis, pyelonephritis, and cystitis. General complications are shock, cardiac, embolus, pneumonia, acute renal suppression, etc. He deals rather extensively with these complications stating that while personally he has had little trouble with hemorrhage, there are many reported cases. It however, can be easily controlled, either by packing, sewing over the torn edges, or by means of a Hagner bag.

In conclusion he states that pre-operative study is necessary as preparation renders the patient more suitable for operation, or determines him to be inoperable. No one operation is suitable for all cases because of the variation in types of gland and because of the more important variation in the vitality of patients. Details to conserve the patient's strength are important. Vigilance in post operative period with early recognition of complications is most important.

### THE MEDICAL RECORD, JUNE, 1917.

Dr. Howard Lilienthal, in an article on the value of X-ray in chronic non-tuberculous surgical conditions, goes much into detail emphasizing the necessity of raying all empyema cases before surgical procedure is undertaken, excepting only the very acute ones, which of course require immediate drainage. By X-raying, one is able to tell whether there is more than one pocket, the size of the pockets, and the direction in which they run. Thus we often times avoid infecting healthy pleura, which we are apt to do by indiscriminate puncture. Likewise, pockets are often overlooked, the surgeon draining only the large ones. Abscess cavities within the lung itself can be located and drained. The chest should be rayed in all cases of sarcoma of the long bones or other metastatic tumors which are prone to early invade the lung. This early invasion is promptly diagnosed by the X-ray, and useless extensive operative procedure is by this means prevented.

## SURGERY, GYNECOLOGY AND OBSTETRICS, JUNE, 1917.

Edward Judd of Rochester, following somewhat along the line of his article on extraperitoneal removal of low placed ureteral stones, takes up the re-implantation of an injured ureter. After stripping back the peritoneum and freeing the ureter from 4 to 6 inches in order not to have too much traction upon it, he makes a small incision in the bladder and obliquely transplants the split end of the ureter allowing it to project a short distance in the bladder. Both sides of the split ureter are then fastened to the bladder wall and the bladder is inverted by two layers of fine chromic. Usually it is necessary to use a small drain to take care of any small leakage that might take place.

## PERSONAL AND GENERAL NEWS

Dr. O. R. Gregg, Freedom, has moved to Waynoka.

Dr. W. W. Farris, McComb, has located in El Reno.

Dr. C. W. Austin, Brinkman, was seriously ill in June.

Dr. J. W. Craig, Vinita, is in Chicago doing special work.

Dr. J. M. Byrum, Shawnee, visited the Mayo clinics in June.

Dr. L. B. Sutherland, Ringling, is in Chicago doing special work.

Dr. J. M. Bonham, Hobart, visited Chicago clinics in May and June.

Dr. C. S. Bobo, Norman, has returned from Chicago, doing special work.

Dr. J. B. Leisure, Watonga, is in Chicago, where he is visiting the clinics.

Dr. W. H. Livermore and family, Chickasha, motored to New Mexico in June.

Dr. M. J. Sanders, Devol, who was sick for some time in May, is slowly convalescing.

Dr. Houston B. Fite, Tahlequah, is on duty with the U. S. Naval Reserves at Houston, Tex.

Dr. C. W. Bacon, Yale, is spending the months of June and July doing eye, ear, nose and throat work.

Dr. J. W. Pollard of Denver, formerly of Bartlesville, visited his old friends in the latter place in June.

Dr. D. Autry, Marietta, returned in June from a month's stay in New York, Chicago and Minneapolis.

Dr. W. E. Dixon, Oklahoma City, announces the removal of his offices to 706-8 State National Building.

Dr. C. L. McCallum, Sapulpa, was visited by the burglar recently, who inventoried the office, taking what he pleased.

Dr. and Mrs. M. H. Foster, Alderson, are automobiling to Greenville, Texas and Opelousas, La., for a visit to the home folks.

Dr. and Mrs. L. H. Buxton add family, Oklahoma City, are spending the summer at the Great Lakes of Wisconsin and Michigan.

Physicians and societies generally over the state are taking steps to care for the work of the absentee physician who goes to war.

Dr. M. Fitzgerald, an El Reno physician, has been acquitted in the Federal Court at Oklahoma City on the charge of violation of the Harrison Law.

Dr. and Mrs. W. J. Wallace, Oklahoma City, visited New York, Philadelphia and Washington in June, Dr. Wallace doing special work in New York.

Dr. T. B. Turner, Stigler, attended the Confederate Veterans Reunion at Washington and then visited New York City and the American Medical Meeting.

Miss Mildred Neal, 812 West Washington, Oklahoma City announces that she is prepared to reach deaf children and wishes such children referred to her.

Garvin county physicians have given notice to the public that on account of the increased cost of living they will raise their professional charges immediately.

Dr. G. W. Stewart, health officer of Kiowa county, was run down and painfully injured in an automobile accident in Hobart, suffering a broken finger and general contusions as a result.

Dr. G. E. Miller, White Oak, a member of Craig County Society, died from typhoid fever June 14. Dr. Miller was 39 years old at time of death and had resided in White Oak for several years.

Dr. L. L. Lumsden, distinguished officer of the U. S. Public Health Service, recently visited Okmulgee and Henryetta in connection with the sanitary survey being made of Okmulgee County.

The Wonders of Tanlac have been further demonstrated by the following from one of Muskogee's well known citizens: "I was in the Baptist Hospital receiving treatment for tape worm. I had lost forty pounds from this dread condition, but after I had the worm removed with some nasty oil the doctor gave me, I regained the forty pounds in a few days, simply by reading the Tanlac Advertisement. I shudder to think what I would look like if I had taken the wonderful remedy."

**The Missouri, Oklahoma and Gulf Hospital**, Muskogee, held its fourth annual commencement exercises at the Severs Hotel, Thursday, June 12. The graduates were Sarah F. McLane and Lucille Hunter.

**Dr. and Mrs. Ernest Cavett**, Kiel, suffered a tragic loss in the death of their nine year old daughter recently. A brother of the child while playing with a loaded gun accidentally discharged it, killing the child instantly.

**Dr. C. P. Eskridge**, a veteran practitioner of medicine who was born in Charlottesville, Va., March 3, 1826, and who for more than fifty years practiced medicine in Texas after graduation from Jefferson Medical College, died at Vinita June 3.

**Dr. N. R. Nowlin**, Oklahoma City, is the latest candidate for the "Abused Order of the Goat." Probably he ought to be elected. A barber claims that the doctor injured his good blade-wielding arm \$10,000 worth when he set the arm after fracture.

**The Muskogee Academy of Medicine** held its annual meeting May 21, electing Dr. P. P. Nesbitt, president; J. H. White, secretary-treas., reelected; I. B. Oldham, C. A. Thompson, F. W. Ewing, censors. Dr. M. K. Thompson read a paper on "The Pathology of the Eye."

**The Physicians and Surgeons Hospital**, Muskogee, held its annual commencement exercises at the Commercial Club Rooms, Friday, June 22. The graduates were Mrs. Ruth Thomas, Grace Warmack, Jennie Doop and Louise Arnold. An address was delivered by Col. S. M. Rutherford.

**St. Anthony's Hospital**, Oklahoma City, celebrated the completion of its \$100,000 addition May 29, holding open house for visitors from 1 to 5 and 7 to 9. The addition is modern in every respect, housing laboratories, children's ward and many new innovations which go to make for comfort and efficiency in the institution.

**Comanche County Society** has offered its service to the Indian Department in caring for the work of Dr. L. A. Milne who has been ordered to Ft. Riley; the pay to go to Dr. Milne. Craig, Muskogee and many other societies have endeavored to work out a plan of doing the work and remitting certain percentage of the fees to the absentee physician.

**Dr. John Reynolds**, city superintendent of health, Muskogee, charges that he is hampered in caring properly for contagions by the failure of the Mayor to provide for fumigation and isolation; that he is hampered by inspectors from the Mayor's "farm" and that he has unearthened evidence that the milk sold in the city has been largely water at times. The Mayor is in the milk business.

**The State Health Department** recently issued a book of instructions to physicians in various parts of the State covering the requirements for examination of recruits for the National Guard. The object being to examine the men at their homes and prevent the State going to the expense of sending the physically unfit to mobilization at Ft. Sill. It was requested that physicians volunteer this service and in most instances this was done.

**Dr. A. L. Blesh**, Oklahoma City, who with Oklahoma physicians, members of the M. R. C., was ordered to Ft. Sam Houston, Texas, has been placed in charge of the operating room of the Base Hospital at that point. The work is very similar, of course, to that encountered in civilian life, consisting of general surgery, principally appendectomies, herniae, the general run of accidents to be found in a large body of men and some gynecological work.

**The following Oklahoma physicians**, members of the Medical Reserve Corps, were ordered to the colors late in May: To Ft. Sam Houston, Drs. A. L. Blesh, F. M. Sanger, Oklahoma City; W. G. Bisbee, Chandler; L. C. Kuyrkendall, L. S. Willour, McAlester; F. L. Carson, Shawnee; Thos. H. Scott, Dustin; Ralph V. Smith, Tulsa. To Fort Riley, P. P. Nesbitt, Muskogee. Dr. John T. Bird, Ingersoll, it is announced has arrived safely in France on the *Mongolia*.

**Dr. Stratton D. Brooks**, president of Oklahoma University, has issued a statement pointing out the probability of a decrease in college graduates for a long time on account of the war and suggests that high school graduates make immediate effort to enter summer training schools for preparation in order to qualify as early as may be. He suggests the advisability of young men, now too young to enlist, taking up the studies of engineering, scientific and technical lines in order to be fully prepared to cope with demands at a later time when they are subject to call of the country.

**Oklahoma University** graduated the following in June: James E. Adams, James C. Binkley, H. C. Bradley, C. Arthur Brake, Thomas M. Boyd, L. H. Carlton, Francis A. DeMand, Walter H. Dersch, Mark W. Gaymon, Abram R. Goodman, John A. Guthrie, George G. Harris, D. J. Herrington, H. Edwin Huston, Henry Lee Johnson, Benjamin G. Jones, Charles B. McMillan, E. A. Morgan, Morris Lhevine, Ernest A. Strader, Frank Thomason, Duke W. Vincent, L. L. Wade and James C. Woll, Jr. The four graduate nurses are Ethel Lancaster, Edith Croan, Edna McKinnar and Tom Cousins.

**Dr. Walter Penquite**, for eighteen years a practitioner of the Indian Territory and Oklahoma, died at his home in Chickasha June 5, after an illness of more than one year's duration. Dr. Penquite was born in Lebanon, Ohio, November 4, 1864. He was educated in the Ohio Wesleyan University and graduated from the Ohio Medical College, Cincinnati, March 7, 1889, after which he located at Lamonte, Mo., removing to Indian Territory ten years later, where he had since been engaged in practice. Dr. Penquite had been a vice-president of our Association and was delegate to the American Medical Association for the years 1915 and 1916. He was an ardent lover of out-door sports and possessed of a geniality of disposition that made him many friends among those who were fortunate to know him. His death is a distinct loss to our profession.



The Walter E. Wright Laboratory, Tulsa, tendered visiting physicians a stereopticon and motion picture demonstration Friday, June 15. The subjects under stereo were clinical cases, with illustrations. The motion pictures were: Supra-vaginal hysterectomy, by Howard A. Kelly; Cystotomy, suprapubic for removal of stone in bladder, by J. Bently Squier; Cholecystectomy, from below upward, from above downward, by Russell S. Fowler. These meetings are very instructive and are well worth traveling far to see. It goes without saying that they are popular with the Tulsa profession.

Officers of the Medical Reserve Corps throughout the United States are now having their fill of intensive training in order to encompass as much as possible in three months, of the course usually given the medical officers of our army in one year. The day's work begins with reveille at 6 a. m. and continues almost without interruption for twelve hours, of course being liberally interspersed with changes in such manner as not to render it monotonous. Nowhere does there seem to be dissatisfaction with the system, on the contrary from every camp comes the wish of the medical officer to be hurried on to France where he may be able to face the real thing.

Woods County Medical Society met in Alva, Okla., June 12, and passed the following resolution: Resolved, that should any physician of the Woods County Medical Society be called to the Army or Navy of the United States, that those physicians caring for the patients of the absent physician shall give to him or to those depending on him for support, one-third of all money and accounts obtained from the patients of the absent physician while serving in the Army or Navy of the United States, and the members of the society further agree that in the event he should return to his former location at the expiration of his service in the Army or Navy that no member of the County Medical Society will treat or prescribe for a period of two years the patients of the physician who has been in the Army or Navy if he can be reasonably secured by his former patients. That the Secretary of the society be instructed to send to the Oklahoma State Medical Society and to the A. M. A. the names of all physicians under the age of 55 who are physically able and qualified to serve in event they are called.

## MISCELLANEOUS

### FOOD SHORTAGE: AN APPEAL TO PHYSICIANS.

By J. Ogden Armour

A food shortage without precedent confronts the United States. Unless there is a change for the better, the coming winter will see prohibitive high prices and consequent suffering from lack of food. The physicians of the United States, as guardians of the public health, are vitally interested because the health and the vitality of the people are at stake. It is in the power of the physicians to help relieve the food shortage by taking the lead in teaching people how to conserve the food supply. It must not be forgotten that conservation of the food supply is just as important and just as necessary as is increased production. Physicians cannot very well increase the production of foodstuffs, but on the conservation side of the problem they can be of inestimable service to the nation.

It is generally recognized that people eat too much. As a nation we are more inclined toward "living to eat" than toward "eating to live." The physicians, better than any others, can discourage this habit of overeating.

Knowledge of what constitutes properly balanced rations is not widespread. Housewives have not yet had opportunity to absorb the information gained through scientific study of the food problem by experts in domestic science. The result is that the American dinner table contains much that is unnecessary and often lacks things which should be there. The physicians of the land can correct this. They can spread corrective propaganda among millions of people, and they will be heeded because of the position of trust they occupy in American families.

Correct dieting on the part of American people is of paramount importance as a measure to guard against the food stringency that faces us. We must stop the waste of food by learning how to maintain our health and our strength on less than we are now consuming. In a word, I mean we must begin eating to acquire a proper amount of nourishment instead of eating just to fill up. We must make a study of the nutrition in various foods and find out what will give the amount of nourishment we really need. When we have learned these things, our housewives can begin serving us with meals that will satisfy the appetite and provide us with plenty of nourishment without entailing any waste. With the waste eliminated the food problem will be practically solved.

There is no doubt in my mind as to ability of the physicians of the nation to make themselves of prime importance in this fight to conserve the food supply. They have the necessary information and they have at their disposal the channels through which it can best be disseminated among the people of the land.

An old adage says, "Go to the busy man to get things done." Appealing to the physicians to help the food conservation movement is surely carrying out the thought in the adage. The physicians will do their "bit" for the fighting forces of the nation. We confidently expect the medical corps to out-strip their European contemporaries in solving the surgical and medical problems of the battlefield and the camp. But it is as necessary to have food as it is to have live soldiers, even in a time of war, for without food there would soon be no live soldiers.

Therefore the "bit" that the physicians can do for their country is not limited to the service

they can render to the army on the battlefield. They can serve the army in binding up its wounds, and they can serve the nation by showing it how to conserve food through the intelligent use of a smaller quantity than is now being consumed.

As one familiar with the food situation, I can say that the public has not yet been sufficiently impressed either with the need for more production or with the necessity for more economical handling. This is a time when one can do things that would seem presumptuous in normal times. Under that right, I call on the physicians of the United States to interest themselves in the food conservation campaign and to do all in their power to advise the public as to the imperative need for conserving to the greatest possible degree, the food supply of the nation.

—*Journal A. M. A.*

### BETTER VITAL STATISTICS.

(State Board of Health.)

On July 1st the new vital statistics law will go into effect throughout Oklahoma. This law is modeled upon the vital registration law drawn up under the direction of the federal government. It has been tested in a number of states. Of course it will be some time before the effects of the law are thoroughly in evidence, but it is hoped that as soon as they are, Oklahoma will be eligible for admission into the federal registration district.

Full and accurate vital statistics are not wanted simply in order to make up tables for the perusal of physicians and health officials. They are indirect, but extremely potent factor in conserving public health. Without statistics showing the number and location of deaths from a particular disease a health department is handicapped in its fight against that disease.

Accurate birth statistics are not less essential. It is an injustice to a child not to provide it with a birth certificate. Often such a failure means great inconvenience and perhaps financial loss later in life. The co-operation of mothers is important in obtaining accurate birth statistics. When every mother realizes that direct injustice is done her baby if it has no birth certificate, she will insist that the physician in attendance make out such a certificate. When this is done full and accurate records will be possible. Incidentally under the new law adequate penalties are provided for failure to furnish birth and death statistics.

### In the Present Emergency.

The people of Oklahoma, as well as the American people as a whole, have failed to realize the vital necessity of accurate birth and death statistics. Public health officials have again and again insisted on their importance, but this advice has not made any deep impression on the public. The present national emergency, however, has brought this subject sharply home to everybody in the community. The United States government issued an order that on June 5th, 1917, every man between the ages of 21 and 31 should register for possible military service. Obedience to this order was not optional. The government said that all within the stated age limits MUST register. Patriotism and a sense of duty would lead the great majority promptly to comply with the order of the government, but for those who would not do it voluntarily there were stern penalties. And promptly every man between those ages, in addition to many who were very near the limits was brought face to face with the question: How did he know how old he was?

It is not enough that a man should think or feel certain that he was born on a certain day in a given year. He should be in a position to know absolutely, to have proof which will stand a legal test. And the only real proof is a birth certificate. It is not to be expected that we will have our birth certificates so that we can readily produce them, but somewhere there should be an official record of one's birth. All sorts of emergencies may arise where such a record is of vital necessity. The need for these records has been accentuated and made plain by the demands of war time, but they are almost equally necessary in time of peace.

### DO NOT FEAR INFANTILE PARALYSIS.

(From the State Board of Health.)

The greatest outbreak of acute anterior poliomyelitis (infantile paralysis) ever known in this country took place last summer. The disease was most severe and the principal center of infection seemed to be in New York City and its vicinity. As the cold weather of autumn came on the severity of the disease abated and it finally died out. Since the great currents of travel run from New York City in every direction over the country it was feared by public health officials that infection might be spread and that the summer of 1917 might see a more wide spread, perhaps a more severe epidemic than did 1916. The New York City authorities, however, who in conjunction with the federal health authorities and investigators from every section of the country have been making a careful study of the problem are optimistic in regard to the situation and do not look for another outbreak of the disease. In a statement on this subject the New York City health department says: "Probably the most significant thing regarding last year's outbreak of poliomyelitis was the fact that in more than 96 per cent of the cases there was only one case of the disease in a family. It is probable that such a condition can result from only one of two things, either a very low degree of infectious material or a very high degree of immunity in the greater part of the population.

"The fear that was produced by the outbreak was all out of proportion to the severity or the extent of the cases. It is estimated that there are 1,600,000 children under 15 years of age in New York



City, so that the total number of children affected with poliomyelitis last year was one-half of one per cent of the child population. Moreover, notwithstanding the outbreak of poliomyelitis there were actually 1,052 fewer deaths of babies under one year of age in the city in 1916 than there were in 1915, and there were actually 324 fewer deaths of children under five years in 1916 than in 1915, although 75 per cent of all reported cases of poliomyelitis occurred in children under five years of age. The death rates of children one year of age and under five years of age and under five years of age were lower in the city of New York than they have been ever before.

"The history of poliomyelitis shows that it appears in epidemic form at fairly regular intervals. New York City suffered from an outbreak in 1907, again in 1912 and again in 1916. The Department of Health does not expect another epidemic of the disease in 1917. It is possible that this may occur in other localities of the United States where it was more or less quiescent last year. Cases of poliomyelitis are occurring constantly and have been for many years. They will be reported in the city from time to time during the summer, but this department is of the opinion that undue anxiety regarding another wide spread outbreak of the disease is not warranted."

The epidemic of last year did not begin to be severe until a little later in the year than the present time. From the general history of the disease, however, there would seem to be at least reasonable grounds for not expecting any severe outbreak of the disease in Oklahoma during the coming summer. Last year there were altogether about thirty cases in this state, not an alarming number when the total population is considered. Nevertheless the State Board of Health has taken the necessary precautions against the spreading of infection to this state and as far as possible suppressing the disease should it break out.

It will be noted in the report of the New York City health department that despite the severity of infantile paralysis in that city last year the total number of deaths of infants and young children decreased. This may have been due to the fact that public apprehension concerning infantile paralysis enabled the health authorities to put into effect hygienic and sanitary measures which were much needed and tended to improve general health conditions. It is unsanitary conditions, unhealthy ways of living, factors which are constant, rather than severe, but occasional epidemics, which take the really heavy toll of infant life.

#### NARCOTIC LAW—DECISION OF COURT.

Refusal of writ of mandamus, directed to the Commissioner of Internal Revenue and Secretary of the Treasury of the United States, as not being the proper remedy to abrogate a regulation (T. D. 2309, dated March 11, 1916), issued under authority of the act of December 17, 1914, to carry into effect the provisions of section 6 of said act, which regulation was issued in the exercise of official discretion. Demurrer by relator to answer of respondent to rule to show cause overruled.

#### TREASURY DEPARTMENT, OFFICE OF COMMISSIONER OF INTERNAL REVENUE,

*Washington, D. C., May 11, 1917.*

The appended decision of Covington, Chief Justice in the Supreme Court of the District of Columbia, in the case of *United States ex rel. George B. Ashley v. William H. Osborn and W. G. McAdoo*, is published for the information of internal-revenue officers and others concerned.

W. H. OSBORN,  
*Commissioner of Internal Revenue.*

#### In the Supreme Court of the District of Columbia.

*United States ex rel. George V. Ashley, relator, v. William H. Osborn and W. G. McAdoo, respondents.*  
(At Law, No. 59555.)

This is a petition for a writ of mandamus, directed to the Commissioner of Internal Revenue and the Secretary of the Treasury of the United States, commanding them to abrogate and cancel T. D. 2309 and all other decisions or regulations in conflict with and in derogation of the act of Congress of December 17, 1914, commonly called and known as the "Harrison narcotic law," and commanding them also to make hereafter only such needful rules and regulations as may be necessary to carry the provisions of that act into effect. A rule to show cause was issued and the respondents have answered the rule. To this answer the relator demurred. The petition, answer, and demurrer have brought the proceeding to such issue that the question whether or not the relator is entitled to the mandamus as prayed for in the petition is squarely before the court for decision.

The petition states in substance that the relator, suffering from a serious cough, consulted professionally a regular practicing physician in the District of Columbia, who prescribed for him certain drugs to be used to alleviate the cough, and wrote the same out on one of his regular prescription blanks. That prescription was as follows:

Ammonium chloride, one dram; *morphine sulphate*, one-fourth grain; sirup of scillae, one-half ounce; and sirup of pruni. virg., one and one-half ounces; dose, one teaspoonful every two hours.

The relator, it is alleged, then had the prescription filled at the store of a registered retail druggist of the District of Columbia, and thereafter took the medicine in the doses prescribed by the physician until the quantity prescribed for him was exhausted. He then went to the drug store from which he had purchased the original quantity of medicine prescribed for him by the physician and asked the druggist to refill the prescription. This the druggist declined to do, stating that he could not legally refill it because of the operation of T. D. 2309, relating to the Harrison narcotic law.



Section 6 of the Harrison narcotic law provides—

That the provisions of this act shall not be construed to apply to the sale, distribution, giving away, dispensing, or possession of preparations and remedies which do not contain more than two grains of opium, or more than one-fourth of a grain of morphine, or more than one-eighth of a grain of heroin, or more than one grain of codeine, or any salt or derivative of any of them in one fluid ounce, or, if a solid or semisolid preparation, in one avoirdupois ounce; or to liniments, ointments, or other preparations which are prepared for external use only, except liniments, ointments, and other preparations which contain cocaine or any of its salts or alpha or beta eucaine or any of their salts or any synthetic substitute for them: *Provided*, That such remedies and preparations are sold, distributed, given away, dispensed, or possessed as medicines and not for the purpose of evading the intentions and provisions of this act. The provisions of this act shall not apply to decocainized coca leaves, or preparations made therefrom, or to other preparations of coca leaves which do not contain cocaine.

Section 1 of that law provides, among other things—

That the Commissioner of Internal Revenue, with the approval of the Secretary of the Treasury, shall make all needful rules and regulations for carrying the provisions of this act into effect.

In pursuance of section 1 of the law as just quoted, the Commissioner of Internal Revenue, with the approval of the Secretary of the Treasury, issued on March 11, 1916, T. D. 2309, which is as follows:

Section 6 of the act of Congress approved December 17, 1914, does not apply to extemporaneous prescriptions unless written for a preparation or remedy as hereinafter defined. The exemptions in that section apply exclusively to ready-made preparations and remedies prepared in accordance with the United States Pharmacopoeia, National Formulary, or other recognized or established formula.

\* \* \* Preparations and remedies within the intent of section 6 are hereby defined to be ready-made compound mixtures prepared in accordance with a recognized or established formula as indicated above, which contain not more than one of the enumerated drugs in a quantity not greater than that specified, together with other active medicinal drugs in sufficient proportion to confer upon such preparations or remedies valuable medicinal qualities other than possessed by the narcotic drugs if dispensed alone.

This decision, the relator alleges in his petition, has been issued by the respondents in contravention of law, in that it is not a regulation in harmony with and merely for the purpose of carrying into effect the provisions of the law, but is in fact a regulation clearly beyond the scope, power, and intent of the law. And the relator then alleges in his petition that by section 6 of the Harrison narcotic law he was entitled to have refilled as many times as might be necessary for medicinal purposes the doctor's prescription which was given to him as recited in the petition. And the relator then alleges that as the refusal to refill the same by the druggist to whom he applied was based upon the T. D. 2309, and that decision having been promulgated by the Commissioner of Internal Revenue and the Secretary of the Treasury contrary to the provisions of the Harrison narcotic law, and being an arbitrary abuse of the authority vested in them, the relator is entitled to have a writ of mandamus issue out of this court commanding the Commissioner of Internal Revenue and the Secretary of the Treasury to abrogate T. D. 2309 and hereafter to make only such needful regulations as may be necessary to carry the Harrison narcotic law into effect.

Before considering at all the validity of T. D. 2309 in connection with section 6 of the Harrison narcotic law, it is of first importance to determine whether or not the relator has actually such a private legal interest in the proper enforcement of the law as to give him the right to institute proceedings to secure such enforcement by the writ of mandamus.

A general duty to the public is not a special duty to the relator or a duty which he can require the performance of through resort to the courts. Every citizen and every taxpayer is interested in the enforcement of law, in the proper administration of law; but that general interest is not a private interest and is not sufficient to authorize a private citizen to institute mandamus proceedings to secure from the appropriate officials the legal administration of such law. The mere fact, therefore that the relator desired to become a purchaser of a combination of a narcotic drug with other drugs and was refused them by a druggist because of the operation of T. D. 2309 would of itself give the relator no sufficient private interest to proceed by way of mandamus to compel the officials charged with the enforcement of the Harrison narcotic law to abrogate existing regulations preventing such sale and purchase, even if those regulations are so arbitrary and so in contravention of the law as to constitute an abuse of official authority.

But the relator contends that the "prescription" given to him by a regular practicing physician for a combination of a narcotic drug with other drugs in proportions permitted in "preparations and remedies" as specified in section 6 of the law operated to put him in possession of something in the nature of a property right, the interference with which gives him a peculiar and private interest in the proper enforcement of the law and enables him properly to institute these mandamus proceedings. But is his possession of a so-called "prescription" a property right? If so, it must be because the "prescription" is the formula of a "preparation or remedy" which does not contain more than the prohibited quantity of opium or other narcotic to the ounce of a preparation, within the meaning of section 6 of the narcotic law. His contention, therefore, resolves itself into the proposition that each time a physician, using his professional knowledge, evolves in his mind a particular combination of drugs that will benefit an immediate ailment of the patient, he creates a "preparation or remedy" within the ordinary acceptance of those terms in the drug trade. It seems to the court that such a contention is erroneous and would overturn the entire theory of the practice of medicine. The relator consulted a physician and presumably gave him a history of his case. The physician diagnosed his case and determined that the particular patient, the relator, with certain existing symptoms, needed a certain quantity and for

certain dosages a combination of drugs which included a narcotic drug. The physician might have given his directions for the medicine for his patient, the relator, directly to the druggist verbally if he chose. The patient, the relator, acquired no property in the thing called the "prescription," and when he went a second time to the druggist to purchase the combination of drugs, including the narcotic drug, which the physician at a particular time prescribed for him to take in a given quantity, he was not in any different position from any one of the public who might have gone to the druggist to make the same sort of a purchase. The relator, therefore, has no private right involved which a court can undertake to enforce.

However, apart from the right of the relator to institute the present mandamus proceedings, it seems clear that the duty imposed upon the respondents in relation to the Harrison narcotic law to "*make all needful rules and regulations for carrying the provisions of this act into effect*" required in its performance the exercise of a high degree of judgment and discretion.

It is quite true that the law can not be amended by a regulation issued by the respondents in virtue of the power conferred upon them under section 1 of the law. The regulations must be in harmony with the law and in an appropriate proceeding a mere arbitrary and unwarranted exercise of power by the respondents might be held invalid by the court.

In this case, however, the respondents have acted. They have exercised their judgment and discretion, and they have acted under the power given them to provide the appropriate administrative details for enforcing the Harrison narcotic law, including, of course, section 6 of that law. The exercise of such power certainly can not be said to be ministerial. In *Field v. Clark* (143 U. S., 694), the court said:

The legislature can not delegate its power to make a law, but it can make a law to delegate a power to determine some fact or state of things upon which the law makes, or intends to make, its own action depend. To deny this would be to stop the wheels of government. There are many things upon which wise and useful legislation must depend which can not be known to the lawmaking powers and must, therefore, be a subject of inquiry and determination outside of the halls of legislation.

If the existing regulations were abrogated by judicial order, and new ones, proper in the judgment and discretion of the officials, were promulgated, and they did not suit the petitioner, he would be again before the court for another writ of mandamus to compel the respondents to abrogate the new regulations and to promulgate still others. The mere statement of that proposition shows that the relator seeks the review of an act of official discretion by the prerogative writ of mandamus.

In the case of *United States v. Black* (128 U. S., 40), it was said by the court, speaking through Justice Bradley:

The court will not interfere by mandamus with the executive officers of the Government in the exercise of their ordinary official duties, *even where those duties require an interpretation of the law.*

In the case of *Louisiana v. McAdoo* (234 U. S., 627), the court said:

There is a class of cases which hold that if a public officer be required by law to do a particular thing, not involving the exercise of either judgment or discretion, he may be required to do that thing upon application of one having a distinct legal interest in the doing of the act. Such an act would be ministerial only. But if the matter in respect to which the action of the official is sought is one in which the exercise of either judgment or discretion is required, the courts will refuse to substitute their judgment or discretion for that of the official intrusted by law with its execution. Interference in such a case would be to interfere with the ordinary functions of Government.

It is possible that in a case where T. D. 2309 as a regulation in relation to section 6 of the Harrison narcotic law is to be construed by a court the regulation may be found to be contrary to the law (although it is fair to say that it seems to this court to be in harmony with the law), but a proceeding to secure the writ of mandamus is certainly not the proper remedy. The court might compel the Commissioner of Internal Revenue and the Secretary of the Treasury to make regulations to enforce the act, if they had not acted, and if such were needed, but it can not command them to exercise their discretion in formulating those regulations in a particular manner.

The writ being refused for the reasons given, it is unnecessary to discuss the other contentions of the relator made at the oral argument and presented in his brief.

The demurrer is overruled.

#### PALATABLE WHOLE WHEAT.

The nutritive value of whole wheat as a permanent article of diet has long been known and its use has been advocated by physicians for years. One objection of the past has been the unpalatableness of the usual forms and especially has this been true in the feeding of children.

It is interesting to note the change in the attitude of the child since the popular invention of Prof. A. P. Anderson (Puffed Wheat) has been marketed. No longer does the junior member of our household refuse. Quite the contrary—he demands.

The invention itself is no less interesting. Sealed in guns, the whole grains of wheat are revolved for an hour in 550 degrees of heat. Thus the moisture in each food cell is turned to super-heated steam. When the guns are shot these food cells—over a hundred million per kernel—explode. The whole wheat grain is transformed into thin, airy, flaky bubbles, eight times their normal size.

By this remarkable process, The Quaker Oats Company, of Chicago, has received the endorsement of physicians for their product.

## STATE BOARD OF MEDICAL EXAMINERS

Meeting April 10-11, 1917.

H. Lee Johnson	Oklahoma City	Oklahoma Univ.	Passed
Simon Ernest Strader	Yukon, Okla.	Oklahoma Univ.	Passed
Herman August LaForce	Eldorado, Okla.	Washington Univ.	Passed
Frank Thomason	Oklahoma City	Oklahoma Univ.	Passed
Abram R. Goodman	Oklahoma City	Oklahoma Univ.	Passed
Morris Lhevine	Oklahoma City	Oklahoma Univ.	Passed
Duke Wm. Vincent	Oklahoma City	Oklahoma Univ.	Passed
Thos. Madison Boyd	Norman, Okla.	Oklahoma Univ.	Passed
Mark W. Gaymon	Oklahoma City	Oklahoma Univ.	Passed
Geo. Gano Harris	Drummond, Okla.	Oklahoma Univ.	Passed
Lisby L. Wade	Ryan, Okla.	Oklahoma Univ.	Passed
Benj. G. Jones	Oklahoma City	Oklahoma Univ.	Passed
Lawrence H. Carleton	Oklahoma City	Oklahoma Univ.	Passed
David J. Herrington	Oklahoma City	Oklahoma Univ.	Passed
Blaine Arlington Waynes	Oklahoma City	Meharry Med. Col.	Passed
Harold C. Bradley	Oklahoma City	Oklahoma Univ.	Passed
Jno. Alexander Guthrie	Oklahoma City	Oklahoma Univ.	Passed
Walter H. Derseh	Oklahoma City	Oklahoma Univ.	Passed
H. Edwin Huston	Oklahoma City	Oklahoma Univ.	Passed
J. E. Adams	Oklahoma City	Oklahoma Univ.	Passed
Jas. Garfield Binkley	Oklahoma City	Oklahoma Univ.	Passed
Chas. Arthur Brake	Geary, Okla.	Oklahoma Univ.	Passed
James C. Woll, Jr.	Sallisaw, Okla.	Oklahoma Univ.	Passed
E. A. Morgan	Oklahoma City	Oklahoma Univ.	Passed
Chas. Pittman Harth, D. O.	Joplin, Mo.	American Sc. Osteo.	Passed
Chas. B. McMillan	Oklahoma City	Oklahoma Univ.	Passed
Cecil B. Shrout	Shawnee, Okla.	American Med. Col.	Passed
28		Memphis Hosp. Med. Col.	Failed

## RECIPROCITY.

April 10-11, 1917.

		From
Henry Homer Gessler	Tulsa, Okla.	Georgia
Emile Roy	Tulsa, Okla.	Wisconsin
George Reed Tabor	Tulsa, Okla.	Texas
Charles Homer Ball	Tulsa, Okla.	Missouri
Silas Murray	Tulsa, Okla.	Tennessee
Wm. Berry Hyde	Paden, Miss.	Miss.
Jesse Morgan Salter	Sulphur, Okla.	Texas
Hugh LaFayette Rains	Bay, Ark.	Arkansas
John Morrison Berry	Marshall, Mo.	Missouri
James Orin Irwin	Stratford, Okla.	Tennessee
Albert Winfrey Pigford	Tulsa, Okla.	Miss.
Elisha Bertram Paschall	Cottage Grove, Tenn.	Tennessee
Robert Claud Farrier	Omaha, Tex	Texas
David Albertus Gregory	Ardmore, Okla.	Tennessee
Chas. Edward Smith	Chickasha, Okla.	Arkansas
Ralph Orr Early	Tulsa, Okla.	Iowa
D. Walter Melton	Goodwell, Okla.	Kansas
Alva Clyde Syfert	Blackwell, Okla.	Kansas
Albert Aazonzo Stoll	Arnett, Okla.	Kentucky
Wm. Thomas Polk	Maysville, Okla.	Arkansas
Sidney Fletcher Yoho	McMeechen, W. Va.	W. Virginia
Roderiek Franklin Brown	Humphries, Okla.	Kentucky
Harry Arthur Briggs	Henryetta, Okla.	Texas
Felix Munroe Utley	Hitchita, Okla.	Arkansas
Daniel Wm. Humphries	Owasso, Okla.	Arkansas
Chas. E. Hayward	Wagoner, Okla.	Arkansas
Wm. Wilbert Montgomery, (Col)	Kansas City, Kas.	Kansas
Anna Geohegan Hubbard	Nowata, Okla.	W. Virginia
Bessie Geraldine Lathrop	Ponca City, Okla.	Missouri

## RE-REGISTRATION.

R. W. Freeman.

R. V. SMITH, Sec.



### PHYSICIANS MAKE SACRIFICES

When a man will give up a professional practice of \$140,000 per annum to accept a commission in the army at \$3,000, he gives substantial evidence that he is a real patriot. That's what a doctor in New York sacrificed when he locked the doors of his office and put on the uniform of the United States medical corps.

All over the land the men of medicine are responding to their country's call. Sixteen men with an income of \$50,000 each have affixed their names to the roster of the federal medical corps. A much larger number, with incomes averaging above \$25,000, is in the same list.

When a physician departs for military service, his professional assets at home shrink. The business man can expect to return from the war and find his commercial affairs intact. The banker can enlist with the knowledge that his associates will conserve his investments. But in the case of the physician, he leaves all behind, and finds little upon his return.

A physician cannot hold his practice except with personal power and professional skill. When he enters the military establishment he makes sacrifices that are unusual. He cannot leave an assistant behind to hold the practice which has been established by long years of devotion.

Our army medical department is being filled with men who are sacrificing careers. They are offering their services on the basis of loyalty. Money is not the magnet. They are running away from the fat fees.

—Oklahoman

### A WARNING.

The other day, at a local hospital, one of our best specialists, while wearing a regulation parabolic electric headlight reflector in a tonsillectomy case, had the most unusual accident of the heat of the headlight igniting the ether fumes in the patient's mouth, the ether all the while being given by the vapor method as driven by the fast bellows to the bottle in hot water and conducted by a rubber tube to the mouthpiece. I never heard of such a thing before and write as a warning. The only reason we could find—and this same reflector has been used hundreds of times—was that it had no vent holes. So I would advise all to see that holes are bored alongside of the socket all the way around, which has been done to this one. This will not interfere with its reflective power and will leave out excess heat. The doctor has given me permission to publish this, also his name, but that is not necessary—just look for a prominent eye, ear, nose and throat specialist minus his eyebrows, and a patient minus tonsils, eyebrows, and with first degree burn of lips and face. The anaesthetist with rare presence of mind and fortitude stayed on the job and suffocated the flames with a towel.—*Knorp in Pacific Med. Journal.*

### THE WAR, MEDICAL CULTS, AND THE LONG-SUFFERING DOCTOR.

When peace fills the land, how it is the fashion to decry the long-suffering doctor. How he and his works and his ideals are held forth to ridicule and scorn and contumely by the yellow medical press, and newspapers of a kind, and "Life," and all the misguided host of fadism who put their trust in quack, charlatan, -path and -ism. How the Legislature and the City Council and the Congress begrudge him law and money for disease prevention, and for establishment of sane and safe health conditions. How he is execrated, and misinterpreted, and underpaid, when peace fills the land. Lo, the poor doctor, fool that he is, trying to destroy his own means of livelihood, trying to return public good for private evil, trying to make the preposterous ideal of service in the world, the guide of his daily conduct.

Then see the remarkable effect of war. Forthwith must this same doctor assume as of right, full responsibility for the health and physical efficiency of the fighting man, and the civilian populace alike. He is expected by common consent to meet the emergency at whatever cost of time, livelihood and life may result. And he assumes the responsibility and meets the emergency, going cheerfully and voluntarily into a service which is only less dangerous than the flying corps. What he is expected to do, he does. What he has trained himself to do, he does. His detractors, and critics and enemies in time of peace, expect him to do this and he does it.

But in times of war where are the self-sufficient and highly trained -paths and -isms and fads and cults? Where is the Christian Science medical unit going to the front to care for the wounded? Where is the osteopathic base hospital, and the naturopathic dressing station, and the chiropractic sanitary corps? What a chance for the drugless healers to cure trench foot, and eradicate disease carriers, and prevent camp epidemics. What a chance for the so-called Christian Scientists to show their Christianity in works of relief and mercy, and their science in the care of wounded and sick. What a chance for cult and -ism to prove their mettle, and speak by action. What a chance,—what a rare chance. Yet where are they, when the serious business of war clangs in, to sift the wheat from the chaff, and winnow out the real effectual human service of the physician?

A. C. R.—California Medical Journal

### NEW MERCURIAL GERMICIDE.

In a preliminary report J. F. Schamberg, J. A. Kolmer and George W. Raiziss, Philadelphia, (*Journal A. M. A.*, May 19, 1917), report the discovery of a new and apparently very effective mercurial germicide as the result of two years' work in chemotherapeutic investigation on mercurial and arsenical compounds. Two of these exhibit remarkable germicidal properties in tests and the physical properties

of one of them render it especially available as a local antiseptic and germicide. This they have designated mercurphen. It is sodium oxymercurey orthonitrophenolate and contains about 53 per cent of the mercury. It occurs in the form of an odorless brick red powder, soluble in water, and can readily be molded into tablets which dissolve with great rapidity. In view of the present war their publication has been hastened and samples have been placed in the hands of different Philadelphia surgeons to test its clinical value as quickly as possible. If the clinical results at all approximate the laboratory tests, they will place the product at the disposal of the army and navy at once. The United States Hygienic Laboratory already has samples. The results of the high dilutions of the drug on various germs in broth benstrum are shown in tabulated form and are at least fifty times more active than mercuric chlorid under the same condition. It has also been shown that mercurphen is capable of sterilizing the skin of the hands in one minute in a dilution as high as 1:40,000 and the new mercurial compound (No. 105) in dilution up to 1:80,000, while mercuric chlorid fails in a dilution up to 1:5,000 under like conditions. Rubber tubing was also tested and feces and the superiority of the new drug was shown. The property of maintaining its disinfectant power in a menstrum rich in protein is considered of special value. The ordinary mercurial compounds are highly corrosive to surgical instruments but these did not seem to be affected by mercurphen. The authors conclude as follows: "1. Mercurial compound No. 99 (mercurphen) exhibits against the *Staphylococcus aureus*, in the 'antiseptic test,' fifty times greater activity than mercuric chlorid; it destroys these bacteria on prolonged exposure in bouillon in a dilution of 1:10,000,000. 2. In a menstrum of ascites fluid, mercurphen is 200 times more germicidal against the *Staphylococcus aureus* than mercuric chlorid. 3. By the Rideal-Walker method, mercurphen exhibits 10,000 times greater germicidal power against the *Bacillus typhosus* than phenol, and over thirty times greater activity than mercuric chlorid. 4. Mercurphen disinfects the hands in dilutions of from 1:10,000 to 1:40,000 in one minute, whereas mercuric chlorid in a dilution of 1:5,000 requires over five minutes, and in a dilution of 1:10,000 requires fifteen minutes. 5. Mercurphen sterilizes ordinary rubber tubing in thirty minutes in a dilution of 1:100,000. Mercuric chlorid accomplishes this result in a dilution of 1:16,000. With tubing heavily infected with cocci and spores, mercurphen required a 1:5,000 solution and mercuric chlorid a 1:50 solution. 6. Mercurphen in a 1:5,000 solution sterilizes feces in thirty minutes; mercuric chlorid accomplishes this result in a 1:2,000 solution. 7. The precipitating effect of mercuric chlorid on human serum proteins is four to five times greater than that exhibited by mercurphen. This is an obvious advantage possessed by the latter substance. 8. Solutions of 1:5,000 of mercurphen exhibit no evidence of tarnishing on nickel plated instruments after twenty-four hours exposure. 9. In experiments not detailed here, mercurphen administered intravenously in rabbits has a lower toxicity than mercuric chlorid."

#### CHLORAZENE AND DAKIN'S SOLUTION.

How does Chlorazene compare with the Hypochlorites or Dakin's Solution? You have heard a great deal about the Hypochlorites, commonly known as Dakin's Solution.

The difference between Chlorazene and Dakin's Solution may not be clear to you. It is just this: Chlorazene is a definite chemical compound (para-toluenesodium-sulphochloramide) which was developed by Dr. H. D. Dakin of the Rockefeller Institute, subsequent to his work with the hypochlorites. This new synthetic is known as Chloramine T in Europe and Chlorazene in the United States. Chlorazene is an improvement upon the Hypochlorites. Doctor Dakin has gone a step further and developed in Chlorazene an antiseptic which is not only as powerful as the hypochlorites and similar in action but one which is less toxic, less irritant, and stable, both in powder and solution. Chlorazene is more convenient than Dakin's Solution and more generally efficient.

The Hypochlorites, to be 100 per cent efficient, must be prepared exactly in accordance with the latest method (there have been three or four formulas) and fresh solutions must be made frequently. The process is involved and technical, requiring a trained chemist and considerable laboratory equipment, each batch must be tested and protected to prevent deterioration for the Hypochlorites are sensitive to light and heat. Few physicians and only the larger hospitals have the facilities for preparing this Hypochlorite Solution.

On the other hand, Chlorazene is supplied in powder and tablet form available for use at any time. It will keep indefinitely. Irrigating solutions for use according to the Carrel-Dakin method may be prepared with Chlorazene promptly and economically.

Every physician and surgeon in the United States should know of and use Chlorazene wherever such an antiseptic is indicated. Literature will be sent on request to The Abbott Laboratories, Chicago, Illinois.

#### COUNCIL ON PHARMACY AND CHEMISTRY.

During May the following articles have been accepted by the Council on Pharmacy and Chemistry for inclusion with New and Non-official Remedies:

**Abbott Laboratories:** Chlorazene Surgical Cream.

**Armour and Company:** Kephalin-Armour.

**H. K. Mulford Company:** Ampuls Calcium Caedylate Solution-Mulford.

**Synthetic Drug Co.:** Diarsenol.



## NEW AND NON-OFFICIAL REMEDIES.

(Abridged Report)

**Parresine.**—A mixture composed of paraffin, 94 to 96 per cent., gum elemi, 0.20 to 0.25 per cent., Japan wax, 0.40 to 0.50 per cent., asphalt, 0.20 to 0.25 per cent., and eucalyptol, 2 per cent. Parresine acts mechanically. It is used in the treatment of burns, "frostbite," "chilblains" and for covering denuded surfaces. For use parresine is melted and applied while liquid by means of an atomizer or brush. The Abbott Laboratories, Chicago. (*Journal A. M. A.*, May 12, 1917, p. 1406).

**Sterile Ampules of Mercury Salicylate, 1 1-2 grains.**—1 cc. of suspension containing 1 1-2 grains mercuric salicylate in a fatty vehicle solid at ordinary temperature. Each ampule contains more than 1 cc.

**Sterile Ampules of Mercury Salicylate, 2 grains.**—Each 1 cc. of suspension contains 2 grains of mercuric salicylate in a fatty vehicle solid at ordinary temperature. Each ampule contains more than 1 cc. of suspension. Hynson, Westcott and Dunning, Baltimore, Md. (*Journal A. M. A.*, May 12, 1917, p. 1407).

**Diarsenol.**—A proprietary brand of arsenphenolamine hydrochloride, chemically identical with salvarsan. For a discussion of the action, uses, chemical and physical properties see New and Non-official Remedies, 1917, under salvarsan. Diarsenol is marketed in hermetically sealed ampules containing, respectively, 0.1 gm., 0.2 gm., 0.3 gm., 0.4 gm., 0.5 gm., 0.6 gm., 1.0 gm., 2.0 gm., and 3.0 gm., diarsenol. The Council accepted diarsenol for New and Non-official Remedies as the available supply of salvarsan appeared to be insufficient to supply the demand, and this preparation conforms to the rules of the Council for acceptance of proprietary preparations. Diarsenol is made in Canada by the Synthetic Drug Company under a license issued by the Commissioner of Patents of Canada. The Farbwerke-Hoechst Company, however, announces that the sale of brands of arsenphenolamine hydrochloride other than that sold as salvarsan is, in its opinion, an infringement of its rights. The company states that all violations of these rights will be prosecuted under the law. (*Journal A. M. A.*, May 12, 1917, p. 1407).

## PROPAGANDA FOR REFORM.

**Preparations of the Pituitary Gland.**—The last edition of the Pharmacopeia, recognizing that the best attested field of usefulness for pituitary extracts is in obstetrics, adopted the test of their activity on the uterus of the guinea pig according to the method of G. B. Roth, of the U. S. Hygienic Laboratory. Roth now reports on the activity of seven commercial samples, the products of five American firms. Four of the samples were found of Pharmacopeia strength; the other three were much weaker. Those preparations which have been accepted by the Council on Pharmacy and Chemistry for New and Non-official Remedies corresponded to the pharmacopeial requirements. Roth's work shows that the blood pressure method for determining the activity of pituitary preparations is not a satisfactory method for determining the activity of a preparation on the uterus. (*Journal A. M. A.*, May 5, 1917, p. 1325).

**Dating of Biologic Products.**—William H. Park, Director, Bureau of Laboratories, Department of Health, City of New York, endorses the recently adopted requirements of the Council on Pharmacy and Chemistry that biologic products to be acceptable for New and Non-official Remedies must bear a statement of their date of manufacture. He believes that these requirements might well be made more specific and stringent. The rules of the New York Health Department governing the distribution of biologic products are: 1. The label on all bacterial vaccines must state the date the suspensions are made, standardized and killed. 2. The label on all serums other than antitoxin shall state the date of bleeding. 3. The label on antitoxins shall give the date when the preparation was last tested. 4. The label on vaccine virus shall have the date when the virus was last tested. Dr. Park states that there is no intention of extending the potency date of bacterial vaccines (four months) or of serums (nine months) other than the antitoxins until there are very specific data on which to act. For vaccine virus 100 per cent of "takes" is demanded. (*Journal A. M. A.*, May 12, 1917, p. 1428).

**Salvarsan in Tabes with Optic Atrophy.**—Some assert that salvarsan occasionally produces optic atrophy; others with extensive experience believe that it has no injurious effect on the eye. If given at all, it should be administered early in the disease. (*Journal A. M. A.*, May 12, 1917, p. 1420).

**K-Y Lubricating Jelly.**—The composition of this proprietary has not been divulged. Probably a simple tragacanth jelly will produce the same effects as this proprietary preparation. At the German Hospital, Philadelphia, a jelly made from tragacanth, 3 gm., glycerin, 25 cc., phenol, 1.5 gm., with water to make 300 cc. has been used for years. (*Journal A. M. A.*, May 12, 1917, p. 1430).

**More Misbranded Nostrums.**—The following "patent" medicines have been found to be marketed in contravention of the requirements of the U. S. Food and Drugs Act, chiefly because the medical claims were found untrue: Whitehall's Megrimine, capsules containing acetanilid, caffeine and salol (in one instance also capsules containing antipyrine and capsium). Brown's Blood Treatment, a liquid containing mercury and iodid. Classe's Great Penetrating Liniment, an alcoholic solution of ammonia, chloroform, opium, camphor, oil of sassafras, oil of origanum and a thujone containing oil. Brown's "935" Injection (Formerly H. W.), a dilute solution of acetate and sulphate of zinc. (*Journal A. M. A.*, May 12, 1917, p. 1427-8).



**Biologic Therapy in the War.**—According to G. W. McCoy, Director Hygienic Laboratory, U. S. Public Health Service, there are five biologic products—vaccine virus, diphtheria antitoxin, tetanus antitoxin, antimeningococcus serum, and anti-typhoid vaccine—which may be regarded as indispensable in connection with conditions which prevail when large bodies of men are brought together. The firms manufacturing these products can, if need be, meet the demands of our own army and civilian population as well as those of our allies. McCoy believes that with the good sanitary conditions that may be expected to prevail in our concentration camps, the need for vaccine agents not thoroughly tried out, such as antidyentery serum, antipneumococcus serum, and vaccines against dysentery, cholera and epidemic meningitis, should not be extensive with the possible exception of the meningococcus vaccine. (*Journal A. M. A.*, May 12, 1917, p. 1413).

**Examination of Ambrine and Various Paraffins.**—P. N. Leech of the A. M. A. Chemical Laboratory reports on the composition and properties of Ambrine and the various preparations proposed for the treatment of burns. He finds that the French proprietary Ambrine—exploited in the United States as Hyperthermine and Thermozone—is essentially paraffin in which a small amount of a fatty oil and asphalt is incorporated. A preparation similar in composition but superior to Ambrine in physical properties may be made by dissolving 3 to 5 drops asphalt varnish in 1.5 cc. of olive oil and adding this to 97.5 gm. melted paraffin melting at 47.2 c. It is probable that for most purposes simple paraffin will answer just as well as Ambrine or the mixtures proposed in its place. Whether used alone or in mixtures, the physical properties of the paraffin are most important. Paraffin U. S. P. will not answer, and hence the properties of many commercial brands of paraffin were determined and the best products are designated. (*Journal A. M. A.*, May 19, 1917, p. 1497).

**Nutrolactis and Goat's Rue.**—Drugs which stimulate the secretion of milk are unknown to science. Yet the proprietary Nutrolactis (The Nutrolactis Company) is claimed to increase the milk supply of nursing mothers. Since dependence on a preparation of this kind is liable to cause neglect of the only means of increasing the milk supply of nursing mothers—care of the general health and a sufficient quantity of proper food—Professor A. J. Carlson and Marion Lewis of the Hull Physiologic Laboratory of the University of Chicago studied this proprietary and the drug goat's rue (*Galega officinalis*), which the proprietors of Nutrolactis hint as being the potent constituent to determine their effects on nursing animals with the intention of extending the study to nursing mothers if the animal trials warranted this. The animal experiments showed that neither Nutrolactis nor goat's rue had any effect on the milk supply of nursing goats or dogs. The Council on Pharmacy and Chemistry, which had caused the study to be made, endorsed the work of Carlson and Lewis, and held that the claimed galactagogue effects of Nutrolactis and the drug goat's rue had not been substantiated. (*Journal A. M. A.*, May 26, 1917, p. 1570).

**Dating of Biologic Products.** For the protection of the consumer as well as the manufacturer, the Council on Pharmacy and Chemistry has adopted a rule requiring that serums and vaccines and similar products to be accepted for New and Non-official Remedies must bear on each package the date of its manufacture in addition to the date required by federal law. The practice now followed by manufacturers of placing on the containers of biologic products the date beyond which these agents are not to be regarded as dependable (though in accordance with the federal law) has not been satisfactory. Except for diphtheria and tetanus antitoxin, in general there are no methods for determining the potency of serums and vaccines. At the present time, for the same material, one manufacturer will fix an expiration date of four months, others one year or even eighteen months. Obviously this lack of uniformity is unfair to the manufacturer who endeavors to supply a product as fresh as is commercially practicable and it also may lead the physician to form a false opinion regarding the potency of certain biologic products. The new rule of the Council will enable the physician to know the age of a given product when it reaches him and will permit him to judge whether or not it has been kept unduly long. Moreover, it will prove not only helpful to the conscientious manufacturer and the physician but will also safeguard the patient (*Journal A. M. A.*, March 3, 1917, p. 728).

## NEW BOOKS

### DISEASES OF THE GENITO-URINARY ORGANS AND THE KIDNEYS.

**Diseases of the Genito-Urinary Organs and the Kidneys.** By Robert H. Greene, M. D., Professor of Genito-Urinary Surgery at the Fordham University, New York; and Harlow Brooks, M. D., Professor of Clinical Medicine, University and Bellevue Hospital Medical College. Fourth Edition, Thoroughly Revised. Octavo of 666 pages, 301 illustrations. Philadelphia and London W. B. Saunders Company, 1917. Cloth. \$5.50 net; Half Morocco, \$7.00 net.

This work is deservedly popular on account of conciseness and arrangement of text and illustrations. Pathology, symptoms, operative procedure, profusely illustrated, and special technic are so arranged that the matter is easily accessible. Especially noteworthy are the sections on kidney diseases, renal operations, Bright's disease and similar conditions. It should prove very valuable to the general practitioner.

## OFFICERS OF COUNTY SOCIETIES

County	President	Secretary
Adair .....	J. Patton, Stilwell	A. J. Sands, Watts
Alfalfa .....	S. B. Growden, Cherokee	L. T. Lancaster, Cherokee
Atoka .....		
Beaver .....		
Beckham .....	J. E. Yarbrough, Erick	K. R. Rone, Elk City
Blaine .....	M. W. Buchanan, Watonga	J. A. Norris, Okeene
Bryan .....	J. H. Shuler, Durant	D. Armstrong, Mead
Caddo .....	W. T. Hawn, Binger	C. R. Hume, Anadarko
Canadian .....	P. F. Herod, El Reno	W. J. Muzzy, El Reno
Choctaw .....	V. L. McPherson, Boswell	E. R. Askew, Hugo
Carter .....	J. C. Best, Ardmore	R. H. Henry, Ardmore
Cleveland .....	J. M. Williams, Norman	Gayfree Ellison, Norman
Cherokee .....	W. B. Blake, Tahlequah	C. A. Peterson, Tahlequah
Custer .....	M. C. Comer, Clinton	S. C. Davis, Clinton
Comanche .....	L. A. Milne, Lawton	G. Pinnell, Lawton
Coal .....	J. B. Clark, Coalgate	A. Cates, Tupelo
Cotton .....	M. T. Clark, Walters	G. O. Webb, Temple
Craig .....	C. S. Neer, Vinita	W. R. Marks, Vinita
Creek .....	C. D. Blachley, Drumright	H. S. Garland, Sapulpa
Dewey .....		
Ellis .....		
Garfield .....	W. L. Kendall, Enid	James H. Hays, Enid
Garvin .....	G. L. Johnson, Pauls Valley	N. H. Lindsey, Pauls Valley
Grady .....	E. E. Dawson, Chickasha	Martha Bledsoe, Chickasha
Grant .....		C. H. Lockwood, Medford
Greer .....	E. M. Poer, Mangum	T. J. Horsley, Mangum
Harmon .....		J. B. Hollis, Hollis
Haskell .....	M. VanMatre, Keota	J. R. Waltrip, Kinta
Hughes .....		
Jackson .....	D. C. Buck, Eldorado	W. H. Rutland, Altus
Jefferson .....	G. C. Wilton, Ryan	J. I. Derr, Waurika
Johnson .....	C. B. Ballard, Mannsville	H. B. Kniseley, Tishomingo
Kay .....		A. S. Risser, Blackwell
Kingfisher .....	C. E. Wagoner, Hennessey	Chas. W. Fisk, Kingfisher
Kiowa .....	Wm. McIlwain, Lonewolf	A. L. Wagoner, Hobart
Latimer .....		E. B. Hamilton, Wilburton
Le Flore .....	J. B. Beckett, Spiro	G. A. Morrison, Poteau
Lincoln .....		A. M. Marshall, Chandler
Logan .....	A. A. West, Guthrie	E. O. Barker, Guthrie
Love .....		
Mayes .....	J. E. Hollingsworth, Strang	W. C. Bryant, Choteau
Major .....		
Marshall .....	A. E. Ballard, Madill	O. E. Wellborn, Kingston
McClain .....	J. W. West, Purcell	O. O. Dawson, Wayne
McCurtain .....	A. S. Graydon, Idabel	C. R. McDonald, Broken Bow
McIntosh .....	N. P. Lee, Checotah	Wm. A. Tolleson, Eufaula
Murray .....	J. A. Adams, Sulphur	W. H. Powell, Sulphur
Muskogee .....	I. B. Oldham, Muskogee	J. G. Noble, Muskogee
Noble .....	Bruce Watson, Perry	T. F. Renfrow, Billings
Nowata .....	J. E. Brookshire, Nowata	J. R. Collins, Nowata
Okfuskee .....	H. A. May, Okemah	J. M. Pemberton, Paden
Oklahoma .....	L. J. Moorman, Oklahoma City	F. B. Sorgatz, Oklahoma City
Okmulgee .....	N. N. Simpson, Henryetta	H. E. Breese, Henryetta
Ottawa .....	R. F. Von Cannon, Miami	G. P. McNaughton, Miami
Osage .....	J. M. Ennis, Pawhuska	Benj. Skinner, Pawhuska
Pawnee .....		E. T. Robinson, Pawnee
Payne .....	E. M. Harris, Cushing	J. B. Murphy, Stillwater
Pittsburg .....	J. O. Grubbs, N. McAlester	J. C. Johnston, McAlester
Pottawatomie .....	J. H. Scott, Shawnee	G. S. Baxter, Shawnee
Pontotoc .....	C. L. Orr, Ada	M. L. Lewis, Ada
Pushmataha .....		
Rogers .....	W. E. Smith, Collinsville	W. A. Howard, Chelsea
Roger Mills .....	W. S. Wimberly, Hammon	Lee Dorrah, Hammon
Seminole .....		W. L. Knight, Wewoka
Sequoyah .....	S. B. Jones, Sallisaw	T. F. Wood, Sallisaw
Stephens .....	E. B. Thomason, Velma	J. M. Nieweg, Duncan
Texas .....	W. H. Langston, Guymon	R. B. Hays, Guymon
Tulsa .....	A. W. Roth, Tulsa	W. Forest Dutton, Tulsa
Tillman .....	A. J. Hays, Frederick	J. E. Arrington, Frederick
Wagoner .....	F. W. Smith, Wagoner	S. R. Bates, Wagoner
Washita .....	D. W. Bennett, Sentinel	A. S. Neal, Cordell
Washington .....	W. E. Rammel, Bartlesville	J. G. Smith, Bartlesville
Woodward .....	Ralph Workman, Woodward	C. W. Tedrowe, Woodward
Woods .....	Isaac Hunt, Freedom	D. B. Ensor, Hopeton

## AN ANNOUNCEMENT

# The National Pathological Laboratories

announce the establishment of a complete laboratory at

## ST. LOUIS

equal in capacity and facilities to the laboratories at Chicago and New York. We present **Dr. Ralph L. Thompson** as the director of this new laboratory, whose reputation is in itself a reliable guarantee as to the accurate pathological service now available at this point.

**WASSERMANN TEST, Blood or Spinal Fluid . . . . . \$5.00**

We do the *classical* test. Any of the various modifications will be made upon request without additional charge. Sterile container, complete with needle, for taking this specimen sent gratis upon request.

**EXAMINATION OF PATHOLOGICAL TISSUE . . . . . \$5.00**

Slides of section sent upon request.

**AUTOGENOUS VACCINES . . . . . \$5.00**

Hay Fever	Otitis Media
Asthma	Endocarditis
Throat Infections	Skin Infections
Sinus Infections	Bladder and Urethral Infections

Cultures are made both aerobically and anaerobically.

**MERCURIAL (GREY) OIL . . . . . \$1.50**

SEND FOR FEE LIST. Sterile containers for the collection of all specimens, with directions, sent gratis upon request.

## NATIONAL PATHOLOGICAL LABORATORIES, Inc.

**CHICAGO**  
5 South Wabash Avenue

**NEW YORK**  
18 East 41st Street

**ST. LOUIS**  
4481 Olive Street, Cor. Taylor



**MAXIMUM**  
TOLERANCE, ASSIMILABILITY

+

**MINIMUM**

DIGESTIVE DISTURBANCES, DIARRHOEA

=

*An Efficient Carbohydrate*

Is why nearly all pediatricists prescribe  
**Mead's Dextri-Maltose** in formulae for

## INFANT FEEDING

Let us send you samples and literature fully describing the simplicity of using Dextri-Maltose in any milk mixture in the same proportion as milk or cane sugar, but with better results.

**MEAD JOHNSON & CO.**  
Evansville, Indiana



## OFFICERS OF OKLAHOMA STATE MEDICAL ASSOCIATION.

Meeting Place—Tulsa, May, 1918.

President, 1917-18—Dr. W. Albert Cook, Tulsa.

President-elect, 1918-19—Dr. L. S. Willour, McAlester.

1st Vice-President—Dr. McLain Rogers, Clinton.

2nd Vice-President—Dr. G. F. Border, Mangum.

3rd Vice-President—Dr. Horace Reed, Oklahoma City.

Secretary-Treasurer-Editor—Dr. C. A. Thompson, Muskogee.

Delegate to the A. M. A., 1918-19—Dr. Chas. R. Hume, Anadarko.

Delegate to the A. M. A. 1917-18—Dr. M. A. Kelso, Enid.

## CHAIRMEN OF SCIENTIFIC SECTIONS.

Surgery and Gynecology—Dr. LeRoy Long, Oklahoma City.

Pediatrics and Obstetrics—Dr. T. C. Sanders, Shawnee.

Eye, Ear, Nose and Throat—Dr. L. A. Newton, Oklahoma City.

General Medicine, Nervous and Mental Diseases—Dr. A. B. Leeds, Chickasha.

Genitourinary, Skin and Radiology—Dr. W. J. Wallace, Oklahoma City.

Legislative Committee—Dr. Millington Smith, Oklahoma City; Dr. J. M. Byrum, Shawnee; Dr. W. T. Salmon, Oklahoma City.

For the Study and Control of Cancer—Drs. LeRoy Long, Oklahoma City; Gayfree Ellison, Norman; D. A. Myers, Lawton.

For the Study and Control of Pellagra—Drs. A. A. Thurlow, Norman; L. A. Mitchell, Frederick; J. C. Watkins, Checotah.

For the Study of Venereal Diseases—Drs. Wm. J. Wallace, Oklahoma City; Ross Grosshart, Tulsa; J. E. Bercaw, Okmulgee.

Necrology—Drs. Martha Bledsod, Chickasha; J. W. Pollard, Bartlesville.

Tuberculosis—Drs. L. J. Moorman, Oklahoma City; C. W. Heitzman, Muskogee; Leila E. Andrews, Oklahoma City.

Conservation of Vision—Drs. L. A. Newton, Oklahoma City; L. Haynes Buxton, Oklahoma City; G. E. Hartshorne, Shawnee.

First Aid Committee—Drs. G. S. Baxter, Shawnee; Jas. C. Johnston, McAlester.

Committee on Medical Education—Drs. A. L. Blesh; A. K. West; A. W. White, Oklahoma City.

State Commissioner of Health—Dr. John W. Duke, Guthrie, Oklahoma.



## A Modern Hospital

A new fire-proof institution for the treatment of Medical and Surgical cases.

Equipment  
up-to-date in  
every particular  
including  
X-Ray Laboratory

Trained Nurses in Attendance. Rates Reasonable.

No patients with contagious diseases received.

Open to all ethical Physicians. Ambulance Service Day or Night.

D. A. GREGORY, Pathologist and Radiologist.

WALTER HARDY, M. D., Resident Surgeon.

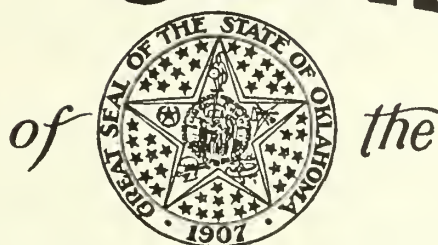
## The Hardy Sanitarium

Phone 122

ARDMORE, OKLA.

212 First Ave., SW

# THE JOURNAL



## Oklahoma State Medical Association

VOLUME X

MUSKOGEE, OKLA., AUGUST, 1917

NUMBER 8

### INTRAVENOUS MEDICATION.\*

W. FOREST M. D., Tulsa, Okla.

Intravenous medication is not the most common method of introducing drugs into the human organism. This is true for several reasons. First, it is a comparatively new procedure. Second, an inability to prepare the organism for such medication. Third, there is no established dosage and method of preparing drugs for intravenous medication.

Intravenous medication is superior to the oral, rectal, cutaneous, subcutaneous, and intramuscular methods of administration.

Medicines administered by the mouth are modified by the secretions of the mouth, stomach, and intestinal tract. The rectal or cutaneous method meets with the resisting substances of their respective locations. Drugs administered subcutaneously or intramuscularly are modified greatly before being taken into the circulation. It, therefore, remains that properly modified and therapeutically applied intravenous medication is the best means of reaching the diseased organism.

Medicines introduced intravenously should be isotonic, or modified, that they will be received into the circulation without any marked reaction, or without disturbing the constructive elements of the blood.

A therapeutic agent, to be directly effective upon the economy of the human organism, must of necessity act through or in conjunction with the hormones. The blood and nervous system are enabled, by this means, to maintain an intimate working relationship. It is, therefore, fair to infer that any abnormality of the blood affects the whole organism, or that any disease of any particular organ can in turn affect the blood.

It is paramount that one should be conversant with morphological, biological, physical-chemical, and bacteriological-parasitological, serological methods, to be efficient in diagnosis, and intravenous medication. Strict attention to the total amount of blood, to hemolysis, to coagulation and thrombosis, and to fermentative activities of the blood is absolutely necessary. A knowledge of infections, immunity, and anaphylaxis is imperative in intravenous medication. Thus fortified we can approach typhoid, luetic, malarial and like conditions with impunity.

A knowledge of the physical and chemical properties of the blood should be ascertained before intravenous medication is attempted. The process of coagulation and the coagulation time are quite important. The phenomenon of thrombin, or thrombase, which converts fibrinogen into insoluble fibrin is equally so; also

\*Read in Medical Section, Medicine Park, May 9, 1917.

the relation of the ferment thrombin to thrombogen and thrombokinase. Ionized lime salts must be present to convert fibrinogen into fibrin. Should it be desired to reduce or prevent coagulation of the blood, sodium citrate or potassium oxalate can be added. Solutions of pepton, or hirudin, added to the blood will hinder coagulation.

To shorten the coagulation time, gelatin injections, sodium chloride, calcium lactate, serum injections have been used. It is necessary to shorten the coagulation time in hemorrhagic diathesis, aneurysm, and in internal hemorrhage. In some clinical cases it is salutary to inhibit coagulation which may be done by venesection and intravenous use of potassium citrate, or by intravenous use of hypotonic solutions. According to Haldane, the total quantity of blood in the adult body amounts to approximately one-twentieth of the body weight. In the anemias, the amount may be much less. It is well to know the physiological and pathological changes in the total volume of the blood. This holds especially in reference to the volume percentages of the corpuscles and plasma. A reduction of the total volume of blood—oligemia—occurs in the severe hemolytic anemias, in conditions of inanition, and undoubtedly in the pseudo anemias. Tropical and polar anemias come in this class.

An increased volume of blood-plethora, either permanent or transitory, in the human body, is due to excess of cellular, or the serous elements, or to both. A most important factor in this condition is the *specific gravity* of the blood. The specific gravity is usually increased as in polycythemia. Plethora is often found in chlorosis, yet specific gravity does not increase in proportion to the increase of volume of blood. *Hydremia* is a condition of the blood in which the water content deviates from the normal and may be due to an increase in water of the blood, or from a decrease in the proteins. This condition causes a reduction in the specific gravity. This affection, as in some of the nephropathies, is often associated with plethora.

In the various hydremias and anhydremias, the water content should be carefully studied, for it is of the utmost importance in treatment of various dyscrasias. It should be borne in mind that blood undergoes temporary dilution after abundant water drinking, or saline infusions, but is quickly returned to a normal condition by diuresis or by absorption of the water by the tissues. The blood may become temporarily concentrated by sweating, or by diminished intake of water. Vasomotor changes, blood-pressure variations, alter the water content of the blood. These variations, as for example, exemplified by adrenalin injections, nitroglycerin, atropin, and other vasodilators and vasoconstrictors should be even a matter of close study.

In pathological conditions such as are found in cancer of the esophagus, or pyloric stenosis, the water intake is interfered with and the water-content of the blood is much lessened. It is also lessened when great amounts of water are lost owing to diarrheas of such diseases as Asiatic cholera, cholera nostras, or severe purgation. The water-content of the blood is often diminished by disease of the glomeruli of the kidney. In hydremias the protein content and water-content should be carefully noted. A true oligemia is the result when they diminish equally.

After severe hemorrhages or too-large venesection the tissues are depleted of water which tends to restore total quantity of blood.

*The regeneration of the protein* is not so rapid, but is gradually established. In chlorosis where the water-content shows normal values and increased protein or in pernicious anemia with increased water-content and low protein values, much care must be exercised in selection of dosage and treatment. The same care should be exercised in hydremia occurring in nephropathies and in hydremia occurring in cardiopathies with failing compensation.

A knowledge of many factors relative to vascular changes, water retention, retention of electrolytes, and changes in absorptive powers of colloids, should always be prerequisite to intravenous medication. A decrease in the liquid con-



stituents of the blood-anhydremia, causes a concentration of the proteins. This condition always means depravity on the part of the organism. The color of the blood is at once indicative of its condition as regards hemoglobin and blood gases. In health the amount of hemoglobin in the normal adult is about 13.5 gr., in 100 cc.

The experimental work on gases of the blood has been mostly on animals. In animals the arterial blood contains about 22 per cent by volume of oxygen; the venous blood 15 per cent of 0.2 by volume. The amount of hemoglobin cannot be determined by the pallor of the mucous membranes, or by the color of the skin. The tension of the gases appear to be of more importance than the actual quantity from a biological standpoint for the tension may be independent of quantity. For instance, the greater the degree of acidosis the higher the  $\text{CO}_2$  tension when the quantity of the  $\text{CO}_2$  continues the same. Alterations in the blood gases gives a factor in the cause of dyspnea. This is evident in the dyspnea of anemic patients where there is diminished oxygen content of the blood. In this case it goes parallel with reduction of hemoglobin.

The dyspnea of open pneumothorax, or high altitudes, is due to the stimulation of the respiratory center from attenuated oxygen in the arterial blood.

In cardiac dyspnea there is an excess of  $\text{CO}_2$  in the blood; and cyanosis likewise due to the high  $\text{CO}_2$  content or lack of oxygen. Setschenow asserts that, in asphyxia, the oxygen-content of the blood diminishes rapidly while the  $\text{CO}_2$  rises in like manner. In the dangerous condition of carbon monoxide poisoning, the oxygen is hindered from uniting with the hemoglobin, and thus the oxygen content of the blood decreases. In prussic acid poisoning, there is excess of oxygen in the blood, and a diminution of  $\text{CO}_2$  due to loss of the power of the tissues to take up the oxygen from the blood.

The reaction of the blood is essentially alkaline, yet from the point of physical chemistry the actual reaction of normal blood is almost neutral. VonJaksch states that the titratable alkalescence of the blood is diminished in fever though the alteration is not permanent. Further, he asserts that concentration of the blood, as in chloremia, the alkalinity is increased. The alkali tension is diminished in uremia.

The specific gravity of the blood in health is approximately 1.055. In pathological conditions it may vary from great concentration (1.080) to great dilution (1.030). The specific gravity of the blood serum (1.030) depends mainly upon its protein-content.

The freezing point of the blood ( $-0.56^\circ \text{C}$ ) determined by cryoscopy, depends mostly upon the salts in the blood. The normal amount of sodium chlorid is about 0.7 per cent.  $\text{CO}_2$  affects the freezing point of the blood, as in cyanosis of emphysema, or myocardial insufficiency.

In intravenous medication the osmotic, thermal, mechanical, and hemolytic resistance of the red blood corpuscles should ever be a matter of study. This is materially true in the treatment of the anemias, hemolytic icterus, and in transfusions. A very great deal of attention should be given the iso-agglutinins and the iso-hemolysins (W. L. Moss).

The viscosity of the blood is one of the most important subjects to be considered in intravenous medication. Increased viscosity, increased toxic condition of the blood, together with insufficiency of the emunctories, produce many of the so-called anaphylactic conditions, after intravenous medication.

It is a subject that very little attention has been given until a comparatively recent date. It is one of the most important subjects, because of the many factors that enter into the etiology. O. Naegeli has given much information on the viscosity of the blood. His investigations have made it possible for a study of the viscosity to be of great clinical value. Any deviation of the viscosity from the normal indicates that there exists an abnormal blood. The viscosity of the blood, in normal adults, averages 5.1. In anemias, the viscosity of the whole blood is

decreased. It is increased in polycythemias. The viscosity of the blood is increased as the  $\text{CO}_2$  content is increased. C. R. Austrian has found that the number of red-cells, the amount of hemoglobin, and the quantity of blood-gases, the amount of protein, fats and salts, influence the viscosity. His studies show reduced viscosity in cases of anemia, increased in cases of diabetes, pneumonia, jaundice and polycythemia.

Naegeli asserts that the viscosity of the blood depends upon the following factors: 1. Viscosity of the plasma or serum. 2. Number and volume of red corpuscles. 3. Hemoglobin. 4. Marked leukocytosis on the number and volume of the white cells. 5. The size and volume of the circulating cells. 6. Nature of the cells as regards amount of hemoglobin and water-content. 7.  $\text{CO}_2$  of the blood. 8. Salts of the plasma.

A systematic study of the chemical composition of the blood should deal with the whole blood, the blood plasma, the blood serum, and the formed elements of the blood. The total solids of the blood amounts to about 22 per cent by weight. The amount of water in the plasma is approximately 90 per cent. The total protein-content of the blood serum which is about 8 per cent, corresponds to nearly 1.3 per cent of the total nitrogen. In the edema of nephritis it may fall to 5 per cent. The fibrinogen-content (0.4 per cent) a globulin forms fibrin during coagulation. It increases in quantity in pneumonia, in suppurations, polyarthritis, and in some experimental infections.

A decrease is observed in typhoid fever, malaria, smallpox, measles, in conditions of inanition, in severe anemias, in leukemia, and in Basedow's disease. It has been assumed by some authors that fibrinogen is found in the bone marrow, while others (Whipple, Goodpasture) believe that the liver is greatest source of fibrinogen.

In health, the fibrinogen content of the blood regenerates very rapidly (Goodpasture). It is reproduced in the body in required amounts and is of vital importance to the organism. In phosphorus, chloroform, and like poisons the liver may be so affected that the fibrinogen is greatly diminished. Hence, the occurrence of ecchymoses and internal hemorrhages in these instances.

The examination which reveals a low fibrinogen content is helpful in the diagnosis of acute yellow atrophy of the liver, cirrhosis of the liver, and also gives a very good foundation for a prognosis. Howell maintains that the hemorrhages of hemophilia are not due to lack of fibrinogen, but to a lowering of the prothrombin-content of the blood plasma.

The rest-nitrogen which is about 5-10 per cent of the total nitrogen of the blood plasma in normal cases, is markedly changed in pathological conditions as in uremia. It is the nitrogen of hippuric acid, uric acid, proteinic acids urea, and the amino acids. The amount varies greatly in normal cases. It is diminished during a fast. On a diet mainly of meat it is markedly increased. Nephropathic cases furnish the highest values. In uremia 0.336 per cent of rest hydrogen has been observed (Strauss).

Fats and lipid substances in the blood deserve to be carefully analyzed. Among their several constituents lecithin, jicorin, and neutral fat are found. Free-cholestrin can be isolated from the blood. Under normal conditions the fat-content of the blood may vary greatly, according to the intake of fat with food.

Fasting diminishes the fat-content of the blood. Lipemia is found in various pathological conditions in diabetes mellitus, with acidosis. It is also found in obesity, pregnancy, chronic alcoholism and phosphorous poisoning. Carbohydrates occur in the blood as free glucose, and "virtual" sugar of Lepine, glycuronic acid, fructose, and animal gum. The normal sugar-content of the blood is approximately 0.1 per cent. Hyperglycemia is met with in diabetes mellitus, and temporarily in other conditions.

The extractive substances of the blood are divided into two classes: Nitrogenous and non-nitrogenous.

Among the nitrogenous are urea, uric acid, carboninic acid, kreatin, hypoxanthin, the amino acids, and the proteinic acids. The normal urea-content of the blood is about 0.1 to 0.2 per cent; but increased during digestion. Urea is increased in the nephropathies. No relation can be found between the amount of urea and uremic conditions.

Increased proteolysis in the body means increased urea-content of the blood. Urea-content of the blood and urine is decreased in hepatic insufficiency. The amino acids seem to replace the urea in this condition. The normal uric-acid content of the blood is about one milligram in 100 cc. (Magnus Levey). Weintraud asserts that a meal rich in purins may increase the amount of uric acid to 5 milligrams per 100 cc. Uriacidemia, and increase of uric-acid in the blood, is always found in gout. It is also found whenever many cell nuclei are undergoing degeneration, as in resolving pneumonia, leukemia, or X-ray therapy of the spleen. Our present knowledge of amino acids is limited.

The non-nitrogenous extraction such as lactic acid, acetone ethyl-alcohols and oxybutyric acid, indol, indoxyl, skatol, and lipochromes must be kept in mind in diagnostic methods.

*Of all the inorganic salts of the blood to be studied for clinical purposes, sodium chloride is the most important.* This study is made from analysis of the ashed blood. The iron content of the blood depends solely upon the hemoglobin.

The ferments of the blood, at the present time, are receiving a great deal of attention. The carbohydrate-splitting ferments, oxidases, and catalases are the more important. The catalases are of much prognostic and diagnostic value and as such have been much used by Winternitz and Meloy. It has been observed that catalase activity is diminished in the renal insufficiency of pregnancy, lobar pneumonia, late in typhoid conditions in prostatic hypertrophy, causing urinary obstruction, in hypothyroidism, and in uremic states. Catalase activity is increased in hyperthyroidism. In diabetes mellitus, well compensating nephropathies, and in the cardiopathies no marked change is observed. Abderhaldens reaction for the early diagnosis of pregnancy appears to be of real value, and it is entirely possible for it to be of assistance in the diagnosis of other diseases of the body.

The importance of a thorough knowledge of the diseases of the blood and of the blood building organs has been fully emphasized in another part of this paper (vide supra). It is fitting at this point to again call attention to the necessity of a study of the regeneration of the red blood-corpuscles, with special reference to the bone marrow. The white blood-corpuscles play, in my opinion, the most important role in the economy of the human body. The multiplicity of places of origin and complexity of their function confronts the investigator with one of the most profound problems in the study of disease. Most authorities agree that, in adults, the white blood-cells are derived from the bone marrow, partly from the spleen, lymph glands, and other lymph-adenoid tissue of the body.

The regeneration of the white blood-corpuscles is no doubt brought about by a hormone. This hormone is the product of stimulation of the affected organ, or organism or both.

The number of white cells vary a great deal, daily, under normal conditions. There is an increase in the number of leukocytes after each meal. In some pathogenic infections there is an increase in the number of leukocytes in the blood, in others the number of leukocytes are decreased as in typhoid.

The birthplace of the blood platelets appears to be in the bone marrow giant cells. That is, during the evolution of the cell, minute portions of the protoplasm are pinched off to form blood plateletes.

It is not within the scope of this paper to discuss the more important methods of examining the blood. These methods and the knowledge to be obtained therefrom should be familiar to every internist.

The details to be observed in intravenous medication relative to operative



site, preparation of the patient, and operative technique are much the same as in intravenous infusion.

The method used by the author differs very little from that in general use. The median basilic, or accessory veins, in and about the bend of the elbow, and the internal saphenous just above the ankle, are the veins most commonly used. The vein is made to fill by pressure on the proximal portion. The skin is made tense and the needle passed gently into the lumen of the vein and pressure removed. Strict aseptic precautions should be observed at all times.

The technic should be thoroughly mastered. Among the serious dangers are undue pain, air embolism, infection, or death.

A thorough knowledge of the drug to be given is one of the pre-requisites of intravenous therapy. The patient should be tested for any idiosyncrasy that might arise. All drugs to be used should be made isotonic. In fact each ion of drug should correspond in resistance to that of the blood. Thus in the administration of 10000 units of diphtheric antitoxin, there is a corresponding toxic resistance, and its activity shall have expended itself in 6 to 10 hours. Mercurialized serum (5.5 mg. mercuric chloride in 8 mills normal serum), salvarsanized serum, and quinine in serum should be measured in like manner.

It is not advisable for the tyro with present methods, to use nitrites, iodids, iron, or salicylates intravenously.

Polypharmacy has no place in intravenous medication. Drugs must be used in proportion to the results desired; some may be used in large doses while others in small and frequently repeated doses.

In an epitomized recapitulation, I would suggest especial attention to the following outline: 1. Diagnosis, correct, absolutely imperative. 2. Individualistic tendencies. 3. Condition of emunctories; functioning power. 4. Central and sympathetic nervous system. 5. Heart and arterial system. 6. Gases and body fluids. 7. Chemical and physiological action of the therapeutic agent to be used. 8. Purity of the agent and therapeutic accuracy of dosage. 9. Preparation of patient. 10. Technic, and post-operative treatment.

### FURUNCLE.

W. Bartlett, St. Louis (*Journal A. M. A.*, June 23, 1917), offers the following treatment for solitary furuncle, a condition in which he says, trauma always plays a definite role in its incipency and this is the reason why it is more frequent in males than in females. On the first appearance of symptoms the lesions should be protected with a bunion plaster or vaccination shield, and not be picked or touched with the fingers or exposed to injury from rubbing. It should be exposed to the sunlight or incandescent electric light as much as possible and acetylsalicylic acid in doses from 5 to 10 grams is useful in limiting spontaneous pain at this stage. If the boil is not aborted by these measures, one should wait till a definite pustule has developed; then infiltrate a definite ring of 0.5 per cent novocain in the surrounding healthy tissue, adding four drops of 1:1,000 epinephrin solution to the solution used, and after pain has been completely stilled the boil should be opened widely by a crucial incision made with a very thin platinum electrocautery blade. If sufficient time has elapsed to ripen, the core can be lifted out at once, but if not, gentle suction should be employed every hour or so with a suction apparatus, the wound being merely covered with a vaccination shield and exposed to an incandescent light. If the lesion is on the back of the neck and any kind of circular bandage used, painful pressure and massage of the wound are unavoidable and it may be further said that any form of dressing makes a pus poultice and accounts for many infections and secondary boils. This treatment can be carried out by any intelligent person and if carefully done will cause great relief. Bier's suction rapidly reduces the edema in adjacent muscles and relieves the disagreeable stiffness of the neck.

## THE PREVENTION OF MALARIA.\*

DR. JOHN W. DUKE, State Commissioner of Health.

The problem of malaria is one of the most important, yet in some ways one of the most difficult, presented to the modern physician and health officer. Malaria cannot strictly be termed a dangerous disease in itself—that is, the direct death rate from it is small. From the strictly medical and clinical viewpoint it does not present the puzzling and baffling features of some other diseases. The active factors in the disease are perfectly well known; there is no doubt about the methods of treatment, although, of course, in this as in other lines medical science is continually advancing, which means to a certain degree changing. The main difficulty in dealing with malaria does not lie along any of these lines. It is largely due to the fact that the problem is a sociological and economic one, in addition to a strictly medical one. Given authority and funds, the State Board of Health could practically eliminate malaria in almost any district; but to reach this end, not only individual, but community interest and efficiency is needed. And every health officer has found through bitter experience that community action is something which we desire many, many more times than we attain.

Despite these difficulties, the malaria problem is not one which can be dodged. It is a problem of import in the South and to a lesser degree in the Southwest. It is a problem of especial interest in Oklahoma, for malaria is a rural, rather than an urban disease, and this is essentially a rural state, we have thriving and progressive cities, but the fundamental interests of Oklahoma are along the agricultural and producing line, rather than along the line of industrial intensity. It is true that malaria is not at all prevalent in this state as a whole. The greater part of the state is free from this disease, but there are certain sections in which it not only prevails, but prevails with an intensity which is a marked factor in diminishing both efficiency and human happiness.

In fact one of the most, probably the most essential factor in attacking the problem of malaria is educational work, both as concerns the individual and the community. The individual must be aroused to the precautions which he can take against malaria, the direct and practical means he can employ to protect himself and his family against malarial mosquito. But the most careful and conscientious effort on the part of a single individual may be to a large extent nullified by carelessness or indifference on the part of a neighbor. Therefore it is equally necessary that the community be aroused to action. Some of the most effective work in the prevention of malaria has been done under government supervision. But such supervision is scarcely possible in this country unless the people concerned are alive to the advantages of it. This can be reached by educational work on the part of physicians and health authorities. There is no other way. There is much encouragement, however, when the results which have been actually accomplished where proper measures have been used are considered. Under Roman rule the Italian Campagna was one of the garden spots of the world. It was dotted with flourishing cities, thriving towns and beautiful villas. Following the sack of Rome, many of the aqueducts were broken, the drainage canals filled up, the land was only partly cultivated. It gradually became one of the most unhealthy spots in the world. Some years ago the Italian government took up in earnest the problem of eliminating malaria from this district. Now the disease is almost unknown. Under even more adverse conditions a considerable measure of success was won by the German government in German East Africa and more would have been accomplished had not the great war intervened. Malaria was one of the most prevalent diseases in the Federated Malay States. Educational work among the natives of either East Africa or the Malay States was obviously impossible. On the other hand, the German government in the one case, and the British in the other, had a free hand. They were able to institute preventive

\*Read before the Oklahoma State Medical Association, Medical Section Medicine Park, May 9, 1917.

measures on a wide scale. Great results were accomplished in the Federated States. There are a number of sections of the United States in which much the same work has been accomplished. And in no part of the world has there been a greater success won than in the Panama Canal Zone under the direction of Surgeon General W. C. Gorgas, of the United States Army. The experiments and investigations made under his direction constitute one of the most valuable chapters in the fight against malaria.

There is a special factor which has operated largely in recent years which will tend to grow more and more important which makes the malaria problem one of great moment to the South and Southwest. These sections of the country are being largely developed from an industrial viewpoint. To a large extent this development is dependent upon the production of hydro-electric power. Huge plants of this sort have been constructed in many of our states and they will tend to increase. That this development is to the economic and industrial advantage of the states in question is admitted. But like many other developments, it is likely to bring with it certain bad results. This does not, and should not, mean that we should forego the development, but it should mean that we will take steps to prevent the undesirable and not absolutely necessary results.

For the production of this hydro-electric power the construction of large dams and the consequent creation of ponds of considerable size is necessary. These bodies of water in many cases have become breeding places for the anopheles mosquito and consequently a cause later for a marked increase in malaria in the adjacent districts. Surveys have been made in a number of places with the view of accurately determining and ultimately correcting these conditions. Progress has been made, but there still is much to be done.

### Prevention of Malaria.

Like many of life's evils, the problem of the prevention of malaria is not so much to know what to do as to get people to do it. It is perfectly well known that the origin of malaria is with the bite of the anopheles mosquito. Obviously the way to avert the disease is, first, protection against the bite of this mosquito, and, second, the prevention of the breeding of the mosquito. In order to have malaria, you have got to have human beings, female mosquitoes of the anopheles variety, and malaria microbes. As is well known, the mosquito does not itself generate the microbe poison causing the disease; she first bites some person having the malarial microbe in his blood, later biting another person and thus conveying the infection.

There is no question as to the great part played by what might be termed human carriers in indirectly extending the spread of malaria. These persons do not exhibit symptoms of malaria. Nevertheless the malaria microbes are present in their blood. When these microbes are transmitted by the bite of the anopheles mosquito to another person an attack may follow. It is pretty well established that the way in which the malaria germs survive the cold of winter is in the blood of infected persons, rather than in hibernating mosquitoes. A somewhat extensive investigation of this phase of the malaria problem was made only a short time ago under the direction of the United States Public Health Service. In certain districts of Mississippi, where malaria is prevalent, examination was made of the blood of 1,184 apparently healthy persons. It was found that 492 carried malaria germs in their blood during the winter. Hibernating mosquitoes to the number of 1,211 were examined and found to be entirely free from malaria germs. In fact no infected mosquitoes were found until May, when they were discovered in the homes of known malaria carriers.

The Bureau of Entomology, of the United States Department of Agriculture, has for some time been carrying on investigations into the causation and prevention of malaria, especially with reference to the effect on rural industries. Dr. Van Dine of that Bureau says: "The prevention of malaria and the treatment of



the disease are two distinct problems. The former is biological in scope, while the latter is a medical problem. The treatment of the disease over long periods in malarial regions has not reduced the malarial rate in those regions except where prophylactic measures have been employed for protection from attack by the malarial mosquitoes, or measures taken to reduce the malarial mosquitoes in numbers. The disease is well understood and treated by the physicians. The physician also urges his patients to screen their dwellings, to use bars against the adult mosquitoes and to prevent the breeding of mosquitoes in and around their properties. Here the responsibility of the physician ceases. The fact that malaria continues, then, is not due to the treatment of the disease, but to lack of control of the mosquitoes that convey it. The present efforts of malarial prevention in this country are based on insufficient data concerning the biology of the mosquitoes that transmit the disease. Practicing physicians in rural districts are free to admit that while they can administer the treatment for malaria successfully, they cannot advise definite preventive measures that meet in a practical manner the peculiar conditions which confront them in their particular zones of practice. It is a fact that prophylactic measures are too general to be standardized. Malaria is a rural disease, but its relation to agriculture and to agricultural development are not known."

One of the most puzzling and difficult features in attempting to fight malaria is the question of dealing with human carriers. At a conference of the Southern Medical Association which was largely devoted to consideration of malaria, Dr. C. C. Bass, of New Orleans, said in regard to this phase of the problem: "With regard to malaria carriers, or men carrying malaria over from season to season, and whether hibernating mosquitoes carry it over from season to season, that question must and will be worked out in the future. Man must be a very important factor in carrying the disease over from year to year, and therefore disinfection of man during the winter would lead to valuable results. If we can destroy the malaria plasmodium in man, or in hibernating mosquitoes, the results would warrant our doing so. We know that a large per cent of men carry malaria over between seasons. We know also, and I think that it is generally accepted to be a fact, that comparatively only a small per cent of mosquitoes are able to live and hibernate during the winter. In the spring we have not very many that have succeeded in going through the hibernating period. Presuming a number of them may be able to carry malaria with them, we would have a small source of infection. The great source of infection, or the carrying of malaria over from season to season, and perpetuating the disease is man and not mosquitoes; and the destruction of the organism must be attacked largely at least in man. The immunity that results from a previous attack of malaria is a very important factor in producing these malaria carriers, or persons capable of being malarial carriers.

"Let us compare this disease with Texas fever or cattle tick fever, a disease of cattle caused by an organism similar to the plasmodium of malaria. It lives in the red blood cells of the animal and reproduces in a similar manner; and an animal, if inoculated, or infected during the early months of its life, acquires a certain amount of immunity. It may be reinfected by ticks and live without developing the destructive form of the disease. If it escapes immunization during the early period of its life, it is very susceptible to the disease and a large per cent of those infected die. An immunized cow is capable of being infected and transmits infection as long as it lives in an infected area of the country and is continually reinfected, but it does not develop the severe form of the disease itself. We can take the blood of such an animal and inoculate it either directly into a susceptible animal, or indirectly from ticks and transmit the disease, but if we transfer the animal for a number of months to a non-tick pasture, then it loses its capacity to infect and retains its immunity during life. It is probable that the same thing occurs to a great extent in man. It can hardly be questioned that there is a considerable amount of immunity acquired by men who have been born and raised in a malarial section. They are still capable of being malaria carriers as long as

they are repeatedly reinfected by infected mosquitoes; that a number of such persons, sick perhaps only once in a while, and many others not sick, are a constant source of reinfection for one another and to others, and that is how the disease persists.

"Disinfection of such individuals would be a matter of extreme importance, and if we educate people to disinfect themselves when they have malaria, we would not have to fight mosquitoes to prevent the disease. Not only does it require the anopheles mosquito, but it requires malaria to transmit malaria from man to man. It matters not how many mosquitoes were present, if we did not have malaria we could not have malaria transmitted. It is important that in connection with any drainage project and education against mosquitoes we should also teach our people how to cure malaria and how to prevent it. The screening of houses and draining of land will cost a lot of money but quinine costs comparatively little. I simply want to emphasize the importance of disinfection of malaria carriers. It is probably of paramount importance for early results."

While the importance of quinine and other means of disinfecting carriers should be realized, it must not be overlooked that although these carriers may be the primary cause for the disease it cannot spread with the intermediary cause, that is the anopheles mosquito. From the immediate and practical viewpoint, therefore, precaution against these mosquitoes, methods of preventing their breeding must be considered. As a matter of fact there are many districts in the United States as well as in other countries where once malaria was prevalent and where it is now comparatively rare. It was not by the disinfection of carriers that this improvement was brought about. In general it was by measures which tended to prevent the breeding of anopheles mosquitoes. There are large areas in the Middle West states and along the Mississippi River where a few years ago "chills and fever" were accepted almost as something which was ordained and could not be avoided. Many of these districts are today comparatively healthful. Often this change has been accomplished simply through the progress of settlement and increase in population, rather than with any intent to do away with malaria, but the result has none the less been attained. Swamps and ponds have been drained, stagnant streams cleared out, other improvements made. Gradually, almost imperceptibly, the malaria disappeared.

The great objection to the drainage of large districts is the expense involved. Often it has been found that good results were accomplished at smaller expense by the spreading of a small film of oil over the surface of the water, thus preventing the anopheles larvas from coming to maturity. In streams where there is a current the clearing away of weeds and grasses along the banks will often accomplish excellent results. Gold fish and many other varieties of small fish are active and persistent enemies of the larvas. It must be remembered that the same floatage which affords a resting place for the larvas is also likely to prevent the fish from reaching them and ponds and streams should be kept clear of it. In many places wave action will prevent the breeding of mosquitoes, but there are likely to be sheltered areas which are not affected. One of the most important precautions is not to permit water to stand in barrels, empty tins, etc. As far as possible small pools and similar bodies of water should be drained. Often the receding of water after heavy rains or freshets leaves little pools, which are fertile breeding places. While mosquitoes breed in the water they shelter themselves during the day when the sun is up in weeds and bushes. As far as possible these should be cut down, especially in the vicinity of dwelling houses. It is self-evident that to be effective these measures must be carried out on a more or less large scale, thus emphasizing the necessity for community action. It is obvious that if one farmer is careful to prevent mosquito-breeding conditions, while his neighbors take no heed, little will be accomplished. Nevertheless a start must be made and if an individual does his own part he not only helps directly but his example may have an excellent effect.

For the protection of human beings while in houses, good screens are the best



measure. Care must be taken, however, that the screen is not only strong and unbroken, but that it is small enough. Otherwise it may have the effect of keeping the mosquitoes imprisoned within the house, for sometimes a hungry mosquito can creep through a too large screen but cannot get out after feasting on his, or rather her, victims. The voracious mosquitoes which are such a pest during the daytime are not dangerous although sufficiently annoying. The anopheles mosquito is seldom abroad except after dusk, she is shy and most apt to bite when a person is asleep and finally she does not sing much. This last is about the only good thing which can truthfully be said of her.

The State Board of Health is alive to the great importance of eliminating malaria in this state. It can do and is doing much in that direction, but its efforts must be largely educational. It can and does point out to the people the measures which will avail against this disease. But it cannot always insist that these measures be carried out. The State Board of Health cannot make a man drain a pond which may breed mosquitoes, unless it can be positively shown that it is a decided menace to the health of the community. There is room for improvement in our laws and as a matter of fact any official who has ever dealt with practical questions has long ago come to realize that more than the mere legislation is necessary. It is all very well to order a farmer to make certain improvements. If he has not the money to make them the order is difficult to enforce. Especially is it hard to enforce laws in any American community if these laws are not backed by public opinion. Much has been done in the way of educating the public but it is a long, hard road. Only slowly does the average man recognize that sanitary laws and regulations are not oppressive measures but measures which will make himself and his family healthier and happier. In this great work of educating the public the State Board of Health can have no more efficient ally than the physicians of Oklahoma. And it is only their due to state that they have given their co-operation freely and cordially along many lines for the conservation of the public health.

While the task of eliminating malaria from our state is not an easy one, it is a work eminently worth while. For the evil of malaria is not measured by the toll of deaths which it takes. An untimely death is to a certain degree a tragedy but it is not the greatest tragedy for death inevitably must come to all. A greater tragedy is a wasted life, a life which might have amounted to something but did not. And there are tens of thousands of such tragedies due to malaria. It decreases the energy, the efficiency, the health and spirits of its victims. It makes them a burden to themselves and those dear to them, when they should be a help. It beclouds their entire outlook on life. There have been many schools, many creeds, many standards, which have swayed men during the centuries we have slowly fought our way upwards from barbarism, but there is one test and standard which is unfailing and can always be applied, whether to a man's entire life or to the work and effort of a single day. And this test is—is human happiness increased, the misery of men and women and little children decreased by this life or this work? It is a simple test, yet a terrible one for it is founded on the eternal principles of truth and right. Even today across 1500 miles of land and more than twice as many of water we have the spectacle of the greatest military empire men ever founded in the most desperate struggle the world has ever seen. And in our hearts we know that it will lose and must lose because its policies and its principles cannot stand this test. But judged by this test the work of the conscientious physician and health officer will stand, for there is none other which is more directly concerned in the promoting of human well being, the final betterment of mankind.

#### Discussion.

**Dr. Chas. W. Heitzman, Muskogee, Oklahoma:** In opening this discussion there remains for me just the emphasizing of some of the many good points that the speaker has incorporated in his paper. For the sake of brevity the "Preven-



tion of Malaria" may be summed up as follows: 1. Treatment of patients. 2. Protection of people living in places where malaria is recognized as endemic. 3. Destruction of germ transmitting insects. 4. Drainage or other special treatment of swampy lands. In the prevention and control of malaria such method should be selected that will be productive of the largest results, with a reasonable expenditure of funds. The malarial index can be reduced 30 per cent if the homes are thoroughly screened. Where it is practicable, as in cities and towns, should always be advocated. However, it costs from \$18 to \$20 to screen a home and there are many rural homes that would have to be reconstructed in order to screen them properly. This limits screening as a means of protection. Drainage is possible in towns and cities, and in certain communities, but there are vast areas where the immense cost is prohibitive and therefore impracticable, and even where drainage is being effected conditions are left which permit the breeding of mosquitoes. The most feasible plan just now, seems to be the proper use of quinine both as prophylactic and curative, i. e., under average rural conditions. But in conducting an intensive campaign for the disinfection of malaria carriers, there are many problems yet unsolved or at least we should understand them better. We should know the proper dosage of quinine that will disinfect malaria carriers in a reasonable time with least inconvenience, and just when to conduct this campaign. Should it be carried on during the months when there are no mosquitoes? Other questions of equal import and practical importance must also be solved. From the investigations that are now being made along these lines, I believe it will only be a relatively short time when information will be available that can be used in intensive campaigns against this menacing disease. The health conditions of the Southern states are essentially the same, and no general plan will overcome them; we must, in order to be successful, apply our remedies specifically, and intensively to the individual and to the home.

**Dr. C. M. Bloss, Okemah:** Considered from an economic standpoint, the elimination of malaria is, for many districts of our country, the most important measure which could be applied. The waste of time, money, health and other resources due to this one factor is very great. I live in a malarial district and I am sure there is no single reform which would be more conducive to the happiness, health and general welfare of the people of my county, than that of preventing or eliminating malaria from it.

A few years back, when we had about three dry years in succession, our malaria almost disappeared. Almost immediately upon the advent of a wet spring and summer, the malaria reappeared in all its former severity. Human carriers undoubtedly harbor the disease for years without outward symptoms. Elimination of the disease involves the eradication of the mosquito or the disinfection of the human carrier. The latter method I believe to be the most practical until the people can be educated to see the economic value to be obtained from the expenditure of large amounts of money in drainage projects and other methods of fighting the mosquito. The ordinary method of giving quinine in malaria (that is the method I have most generally used) of giving fifteen to thirty grains on the morning of chill day before the chill time, following it up on several successive chill days, while very effective in stopping the chills, I have found to be very frequently followed by recurrences in a few weeks. Sometime back I began following the suggestions of Dr. Oschner of Chicago in the treatment of such cases and with excellent results, I believe. The treatment consists in, first, thorough elimination by means of a hydragogue cathartic, followed by the giving of two grains of quinine every two hours, night and day, for thirty doses. This is to be given in capsules with the cap off and accompanied by a hot drink. Only a light liquid diet is allowed during the giving of the quinine. Seven days from the beginning of the first course, a second course of thirty two-grain capsules is begun and given in exactly the same manner as the first. Dr. Oschner claims that by careful attention to the giving of quinine in this manner, all the organisms and spores as well

will be killed. I believe I have gotten most excellent results myself from this method in a few cases which continued to recur under my former treatment.

**Dr. Duke**, closing: In answer to Dr. Bloss regarding the treatment of this disease, I purposely refrained from taking up this feature of the subject, believing that more good could be accomplished by calling your attention to malaria as a sociological factor than could be gained by considering it as a medical problem. The medicinal treatment of this very prevalent disease is so well known that I probably would hardly be justified in taking up your time in calling your attention to what I believe to be a successful treatment for malaria. However, from a prophylactic standpoint, if all individuals who are carriers could be induced to take from two to eight grains of quinine two or three times a week, extending over a period of four to six weeks, beginning in the latter part of March, I am confident that malaria in that community for the next few years would be a negligible problem.

I was born and raised in the Mississippi Yazoo-Delta. I, therefore, flatter myself in the belief that I have considerable knowledge regarding malaria in all its phases, both as a layman and as a professional man. The planters in that country know how to properly treat malaria therapeutically. Quinine is a daily routine as a prophylactic measure. When some member of the family, or some tenant on the plantation, is stricken down by a malarial attack he is as often seen by the master of the plantation as by a doctor, both of whom invariably order abstemious diet, liberal hydrogogue cathartics, and the administration of quinine every two hours without missing a dose, for at least thirty-six hours. This is the one, two and three day attacks. In order to catch the spores which develop into malarial plasmodia about the seventh day, quinine is given on the sixth day, two doses every two hours for about twenty-five doses, which is repeated again on the thirteenth day, and the twenty-first day, when it is concluded that the malarial for that season has been broken for that particular individual, and the conclusion is ninety-nine times in a hundred correct.

I am sure that no malarial mosquito could live in the temperature of this pavilion this morning, and I have not been able to observe a very great activity of the heat bacillus in our midst. I am, therefore, not going to detain you longer.

### PARAFFIN FOR BURNS.

Torald Sollmann, Cleveland (*Journal A. M. A.*, June 23, 1917), after mentioning the main drawback of the paraffin method in the inconvenience of melting the paraffin and keeping it melted at the proper temperature between 55 and 60 C., reports his results with two devices, an electric "food warmer" for office use and an "acetate thermostat" for shop and field practice. The food warmer is the pint size sold for the warming of babies' milk bottles. When filled one half or two thirds with paraffin of melting point 47.5 C., it can be used in three minutes after the current is turned on. If the current is then turned off again for two minutes, it will have just the right temperature and will remain usually melted for ten minutes without current, when a crust begins to form; and it can then again be made usable by turning on the current for a few moments. He gives a table showing the data of an actual experiment. The next device, the acetate thermostat, is based on the principle of the property of sodium acetate to melt and congeal at just about the temperature that is needed and maintaining it constant for a long time while passing from the solid to the liquid state. The author gives a table showing the cooling of sodium acetate which holds its temperature for three hours after removal from the heat; this period could be prolonged by setting it in another pot. Sodium acetate is sirupy, not easily spilled. It does not evaporate so that no attention is required in this direction. The apparatus that Sollmann is using is an ordinary glue pot, size 0, the outer pot filled two thirds with the acetate and the inner vessel holding about a pound of paraffin. This apparatus can be carried to any part of the shop or in an ambulance to a dressing station.

## INJURIES OF THE HEAD.\*

J. W. RILEY, M. D., Oklahoma City, Okla.

The object of this paper is not to add anything particularly new to this important subject, but to call attention to certain anatomical and physiological conditions and the relation that they bear to brain injuries and their frequent effects.

The dura matter of the brain covers the interior skull and extends through the various foramina of the skull as an outer covering for the various nerves at these exits. This is especially noticeable around the optic nerve and accounts for the dilated veins and the choked disc that appears as a result of intra-cranial tension.

The dura is composed of two layers: 1. An outer tough fibrous layer that forms an endostium for the cranial bones. 2. An inner more delicate endothelial layer. This layer separates to form the sinuses of the brain, the falx cerebral, falx cerebelli and the tentorium. The dura receives its nerve supply from the fifth cranial nerve and is extremely sensitive to pressure.

The arachnoid lies over the surface of the brain while the pia dips down into the sulci and covers the surface of the convolutions. This arrangement has been compared to a mitten pulled over a gloved hand. The mitten and glove represent the arachnoid and pia respectively.

The blood supply to the surface of the brain has a very free anastomosis, while that to the basal ganglia is terminal. These vessels arise at right angles and this plays an important part in the reduction of intra-vascular pressure and flow. As far as is known these vessels have few if any vaso-motor nerves, and intra-cranial pressure is dependent on gravity and the controlling influences of the vaso-motor center on the systemic circulation. The veins are large, thin walled, and very responsive to compression and distention, they have no valves and many of them are terminal. Softening may occur as readily from them, when obstructed, as from arteries. This is especially noticeable in the vein of Galen.

In case of obstruction to the venous outflow, the posterior condyloid, the diploid and orbital veins act as accessory channels.

In head injuries it has been the custom to consider the symptoms as due to concussion, contusion, laceration and compression. All may appear in the same patient.

Concussion is a clinical condition about which much has been written and apparently very little known. Clinically it has been divided into three varieties or degrees, mild, moderate and severe. At the present time it is generally believed that concussion is a microscopic contusion of the brain. Examination of the brain after death from concussion, has shown extensive injury in many cases.

The commonest sites of contusion and laceration are the regions near the middle fossa and the tips of the temporal and base of the frontal lobes. According to Brun's (Heidelberg statistics) 60 per cent of the deaths in the first 12 hours, following head injuries, are due to contusion. This was most marked in the cerebellum.

In compression of the brain, whether from extra-dural, subdural subarachnoid, or intra-cerebral hemorrhage, depressed bone or resulting oedema, we have a condition that demands the most careful judgment and observation, if we are to prevent the present fearful mortality and post traumatic disabilities.

Sharp reports a mortality in brain injuries, of all cases, from three of the large New York Hospitals, from 1900 to 1910, at 46 to 68 per cent. Besley reports 1000 consecutive cases of fractures of skull, at Cook County Hospital, with a mortality of 53 per cent. Sharp further reports on 34 per cent of cases of head injury, discharged from three of the large New York hospitals 1900-1910.

---

\*Read before the Section on Surgery, Medicine Park, May 9, 1917.



This shows that 67 per cent of the 34 per cent are still suffering from the effects of the injury. Such as headache, fatigue, vertigo, excitability, irritable, listless, happy-go-lucky, good-for-nothing bums and epileptics. He believes that as a result of the injury there occurs an increased intra-cranial pressure, which prolonged over a long period of time impairs the function and blood supply to the cortical nerve cells. This condition also gives rise to the chronic oedematous brain.

In compression of the brain the determining factors depend on whether the intra-cranial pressure is due to a local or general condition. If due to a local condition, its effect depends on the site, amount and duration of pressure and is greatest at the site, and the systemic effects increase proportionately the nearer it approaches the vital basic centers. If the intra-cranial pressure is general, it involves the entire cerebrum, as is found in extravasation of blood, or serum, meningitis, hydrocephalus and oedema of traumatic or systemic order.

The duration of increased intra-cranial pressure is of much importance. A slowly increasing pressure gives few or no symptoms at first, while a pressure of sudden onset give manifestations at once.

The effects of increased intra-cranial tension depend on the duration of the pressure. Venous stasis and diminution of cerebrospinal fluid are seen early, and later when the pressure equals that in the capillaries and veins there results cerebral anaemia and loss of function of the brain. In the medullary centers this gives rise to stimulation of the vaso-motor centers and increase of blood pressure (Cushing). The increase of blood pressure tends to relieve the anaemia of the brain for the time at least, and there is a tendency to repeat itself. The progressive rise of blood pressure is due to constriction of the splanchnic field and when the pressure is fluctuating it gives rise to Cheyne-Stokes respiration (Cushing).

If the cerebral pressure continues to increase, then the arterial pressure finally fails to respond, medullary oedema occurs, the respiratory centers fail and finally the heart ceases to beat. According to Archibald in the *American Practice of Surgery*, there must be a displacement of a least 6 per cent of the brain mass before signs of general pressure exists.

The results of anaemia of the medullary centers are: 1. High blood pressure from stimulation of the vaso-motor centers. 2. Slowed pulse from stimulation of the vagal centers. 3. Cheyne-Stokes respiration from fluctuating levels of raised arterial pressure.

The various phases have been classified by Cushing as follows:

1. Stage of compensation. (a) Mildest form. (b) No medullary symptoms. (c) Not unlike post concussion type. (d) Occasional temporary focal signs.
2. Stage of manifest beginning compression. (a) Exaggeration of first stage. (b) Cyanosis of face. (c) Veins turgid. (d) Papillary oedema. (e) Slow pulse and increase of blood pressure. (f) Meningeal irritation.
3. Stage of acme of manifest compression. (a) Marked evidence of capillary anaemia and medullary pressure. (b) Paralysis of varying degree. (c) Cyanosis marked. (d) Respiration—increased, stertorous and Cheyne-Stokes. (e) Pulse—slow, full and bounding. (f) Blood pressure—progressively increased. (g) Unconsciousness (cortical anaemia)—partial or complete. (h) Reflexes abolished. (i) Optic oedema marked.
4. Stage of paralysis. (a) Paralysis—complete and flacid. (b) Respirations embarrassed. (c) Pulse rapid and weak. (d) Coma—deep. (e) Pupils widely dilated. (f) Blood pressure fails. (g) Respirations cease before heart beats.

Let us for a moment consider the physio-pathological condition present in a recent brain injury. As a result of the injury we have an irritation of the vagal respiratory centers, with slowing of the pulse and respirations. At this time there may be no increase in blood pressure.

When the compression is equal to or greater than the systemic pressure (which

occurs when about one-sixth of the total brain contents have been displaced), the cerebro-spinal fluid escapes, the veins cannot empty and become distended, the cerebral capillaries are collapsed and anaemia of the brain produced. As a result of this anaemia the vaso-motor, vagal and respiratory centers are stimulated, which causes the systemic blood pressure to be increased until it is greater than the compressing forces and the anaemia is relieved. The pulse and respirations in the meantime become slow. If the cerebral compressing force is still active, this process may repeat itself several times and until the centers are exhausted from this continued stimulation. The pulse and respirations become rapid, the blood pressure is decreased (paralysis) and foretells a fatal issue.

If this is the physio-pathological picture, then the treatment must be of such a character as to relieve this compressing force and imperatively before the exhaustion of the medullary centers. That is, early in every case of severe head injury, when the clinical evidence points to an increasing intra-cerebral pressure, a subtemporal decompression should be done.

Lumbar puncture, if carefully used, is a valuable procedure. With marked intra-cranial pressure and a low cerebro-spinal pressure it is a dangerous procedure, because of the danger of medullary plugging of the foramen magnum. The vaso-motor centers are overcome and cerebral anaemia develops.

In every severe brain injury, careful and frequent observations must be made of: 1. The pulse rate. 2. The respiratory frequency. 3. The blood pressure. 4. The state of consciousness. 5. The condition of the fundus of the eye. 6. The pressure of the cerebro-spinal fluid.

In the past three years Sharp reports 239 cases of recent brain injury, 227 fractures of the skull. 79 operated, 14 deaths, mortality 17.7 per cent. 160 not operated, 63 deaths. He is convinced that in basal fractures treated with subtemporal decompression that meningitis, medullary compression and possible oedema and chronic wet brain may be averted. Another point of importance is the absence of extra-dural middle meningeal hemorrhage and increased frequency of multiple punctate hemorrhage, which is contrary to our text book exposition.

J. H. Long in the *Long Island Medical Journal*, after a study of 76 skull fractures, has been impressed by the following facts: The classical slow pulse and high pressure are absent in a large proportion which have an extensive intra-cranial hemorrhage. If the skull is only opened when these symptoms are evident, many cases which could be relieved are neglected. When the slow pulse and high pressure are present, there are indications of the reaction to high cerebral pressure and there is no reliable sign which will indicate whether the vital centers will be overpowered within five minutes or will continue to react and keep the blood pressure above the cerebral.

\* A patient in coma following a head injury is in a very critical condition and prognosis is uncertain. Decompression, if done at all, is in the great majority, done too late, i. e., when the indications are very clear. In the cases observed there has been none in which death was caused by the operation, but many in which prompt decompression would have preserved life. A few mild cases rapidly develop fatal symptoms and a few of the worst cases get well without operative aid.

In the fatal base fractures death occurs within 12 hours, in 13 of the 14 fatal cases. In the vault fractures death seldom occurs within 12 hours. Of the 12 fatal cases, 5 died between 12 and 48 hours and 6 lived more than 48 hours.

V. P. Blair in the *Journal of the American Medical Association*, reports his experience in unlocalized intra-cranial injuries. Of 42 cases, in 31 through a single or bilateral subtemporal operation, pulpified brain substance, a subdural clot or severe hemorrhage was dealt with. In seven other cases either an extra-dural clot or contused brain was expressed.

As a matter of interest he has made comparison between series with a run-

ning series of 80 basal injuries not operated on in another service. In these cases without operation there was 17 deaths within two hours after admittance and these were eliminated, leaving 63 injuries not operated on in which there was survival for two hours or more. In the series with operation, 17 patients were operated on within two hours.

In 63 patients not operated on who lived more than two hours, 35 per cent survived. Of the 42 patients operated on, 57 per cent survived. The time of operation would appear to be important. In half of the successful cases, but in only one-third of the fatal cases, the operation had been done within two hours. Of the patients on whom the dura was open within the two hours, 70 per cent survived.

The significance of time is indicated by the following: Of those not operated on who survived 24 hours, 58 per cent ultimately recovered. Of those operated on who survived 24 hours, 75 per cent recovered. Of those who survived 48 hours, about 75 per cent in either series ultimately recovered. Next to disturbance of the sensorium, the most constant single sign of severe brain injury was disturbance of the pupillary reflex. Of patients giving this sign in the series without operation, 27 per cent recovered, with operation 57 per cent recovered.

The subtemporal decompression consists in the removal of the squamous portion of the temporal bone from near the parietal ridge to the base line of the temporal bone, with incision of dura and draining of middle fossa for 48 hours.

All cases of brain injury following fracture of the base do not need operating, probably 50 per cent recover without it.

The important point under consideration is that the operation should be performed before the exhaustion of the medullary centers occur, for if done on a patient with an increasing pulse rate, it only adds shock and death.

### Conclusions:

1. The dura mater is an important structure in brain injuries.
2. Concussion is a relative rather than a pathologic condition.
3. Compression of brain and medullary vital centers are the important factors in brain injuries.
4. All cases of brain injury that live are not necessarily cured.
5. A plea for a subtemporal decompression in brain injuries that show evidence of increasing intra-cranial pressure and thereby rescue the mortality and post traumatic incapacities.
6. Operation not to be considered in a rising or rapid pulse.

### Discussion.

**Dr. S. H. Landrum**, Altus: Diagnosis in these cases of course is the most important thing to consider, and to make that diagnosis with the greatest safety to the patient is all important. It may often be done by making a preliminary spinal decompression. If the patient gets some relief from the withdrawal of 15 to 20 cc. of the spinal fluid, then we can do the cerebral decompression.

**Dr. LeRoy Long**, Oklahoma City: This is just the kind of paper we would expect Dr. Riley to read. It was very thorough. We should be very careful in coming to the conclusion that all cases of brain injury should be operated on quickly, and with reference to Dr. Sharp, of New York City, whose paper he quotes extensively, I think it is one of the most important works on this subject I have read for many years. I think cases of brain injury should not be indiscriminately operated on. They should not be operated on while in shock. In my judgment a subtemporal decompression should not be done with a fast pulse and low blood pressure. If the pulse goes down and the blood pressure is rising, then is the time to do the subtemporal operation. Therefore, the operation, as I see it,



and as has been pointed out by these men who have large experience, should be done first fairly early, that is before we have the development of paralysis. Do not do it when we have beginning of oedema of the brain. I feel like this question of how to treat these cases of brain injury is a question of the greatest importance. We see so much of it in Oklahoma City. We have had such a large clinic in this particular field and that is the conclusion we have arrived at, do not operate if he has a low blood pressure or high pulse.

**Dr. K. R. Rone, Elk City:** I appreciate Dr. Riley's paper, and believe it to be a most excellent one, for it is too often we do not know just what to do in a given case. Ischemia too often quickly ensues, and destroys the vitality of the tissues to the extent that it leaves its markings in after years. I think the question in surgery is not only a question to operate or not to operate, but how well our patient will get along after an operation. In my mind this is a serious problem. A great many of these cases will be followed by epilepsy and stupidity of mind, that will bar them from making the men they should be. Those cases of fracture of the skull, where we cannot operate so well, fractures followed by bleeding at the ears and eye symptoms, indicating the seat of fracture, should be guarded closely. We should disinfect the ears, and use sterilized gauze, and as far as possible prevent any invasion of a bacterial nature, that would lead to meningeal trouble.

**Dr. Ross Grosshart, Tulsa:** This is a subject that has given me a great deal of worry and one which I undertook to write a little essay upon four or five years ago, and I gave it to this society, on account of the surgery we have in our county. The oil fields are a place where there is more head injury than any place in the whole country, and I agree with what Dr. Riley and Dr. Rone have said in regard to the time of operation. You have to be governed, however, by what you do for a particular patient by the pulse, respiration and general condition of the patient. These patients you get out of the hospitals are not always well patients. The conditions that follow afterwards. I would rather be shot through the body and take my chances than to be hit over the head. These patients either lose their self control and are nervous and develop epilepsy, etc., and the patient who gets out of the hospital is not always a well patient, and the time to operate, as the doctors have indicated, is right.

**Dr. John Riley, Oklahoma City, closing:** I want to thank you for the discussion of the paper. It has been said that tradition is the blindest master that man can follow, and I believe that in injuries of the head we are passing through an experience, of much the same character, as in the treatment of appendicitis. Head injuries, with its tremendous mortality and incapacity, is a very serious question, and demands a most careful consideration. I do not believe that every person with an injury of the head should be operated, but I do believe that he should be carefully examined, every two hours if you are on the job. I believe that in many head injuries, a spinal puncture is invaluable in relieving that awful headache. This problem demands team work and careful examination if we are to reduce the present mortality and post traumatic incapacity. We no longer think of the bone injury in these cases, but it is a question as to what has happened to the patient's brain.

---

### HERPES ZOSTER.

S. L. Immerman, Philadelphia, (*Journal A. M. A.*, June 2, 1917), says that herpes zoster may develop in any case of paresis and is often an initial symptom. Zoster involving the entire length of the upper extremity alone appears to be uncommon and this was the condition in one of the cases he reports. Two of the three cases were paretics and one a tabetic. The herpes in these cases was of a symptomatic variety, that is, he says, due to involvement of the ganglions in the pathologic processes of the disease. The nature of the ganglions changes, he holds, is probably specific, due to the spirochetes or toxins.

## REMARKS ON ACCIDENTAL BRAIN INJURIES.\*

ANTONIO D. YOUNG, M. D., Oklahoma City, Okla.

Recent study has brought about practical unanimity of opinion regarding the management of accidental brain injuries, and I am attempting to epitomize the subject for your consideration.

Depressed fractures of the cranium frequently are without general symptoms aside from temporary unconsciousness and even this is sometimes absent. However, if there is considerable bruising of brain tissue or there is rupture of a meningeal artery with consequent hemorrhage, the signs of cerebral compression appear. These are slow pulse, disturbed respiration, headache and slowly developing coma. The coma may appear in a few hours or a few days, but is usually marked by the end of the twelfth hour. Should the fracture occur over the motor area, hemiplegia of the opposite side may appear instantly or in a few hours.

The treatment of depressed fracture is obvious. The fragments of bone should be elevated or removed as soon as possible and all meningeal bleeding vessels ligated. It would be a fine thing, indeed, if in a large single hemorrhage the exact spot could be located, the vessel ligated and the clot removed. Theoretically, this can be done but practically such an ideal procedure can rarely be accomplished because in most instances the hemorrhage is multiple and its exact site is very difficult to determine.

Linear fractures and fractures of the base of the skull cannot, of course, be palpated and the diagnosis is made by the symptoms of compression recited above and by bleeding from the ears and nose with or without escape of cerebro-spinal fluid, and by echemosis about the eyes, not caused by direct violence to the soft structures in this locality.

Occasionally the X-ray will show an otherwise unrecognized fracture, but the negatives are often disappointing. In a linear fracture, for instance, the angle at which the exposure is made may entirely obliterate the outline. However, it is often a useful procedure and should be used in all doubtful cases. It is also well to bear in mind the fact that fractures of the skull may occur without symptoms and the patient remain permanently well or he may suffer years after as a result.

More or less intra-cranial hemorrhage accompanies all fractures at the base of the skull and the danger to life lies in the cerebral compression thus produced, and not to the fracture itself. Where there is traumatic communication between the interior of the cranium and the external surface of the body, the liability of a subsequent meningitis must be borne in mind. I have seen this unfortunate condition occur months after the injury in a patient with basal fracture, whose cerebro-spinal fluid continually escaped through his nose. In the absence of characteristic symptoms in those patients where the nature of the injury suggests basal fracture, a special puncture often aids by showing a bloody spinal fluid. In this condition the blood in the fluid is hemolysed which differentiates it from spinal fluid accidentally contaminated at the site of the puncture. However, blood is not always present even in subdural hemorrhage, hence its absence does not prove that intra-cranial bleeding is not taking place. Then, too, the withdrawal of a considerable amount of spinal fluid has a certain therapeutic value, in that it reduces intra-cranial pressure, thus helping to avoid oedema of the brain and lessening the tendency to stupor and delirium and relieving the severe headache. If, however, the intra-cranial pressure is very high, there is some danger of compressing the medulla in the foramen magnum with its consequent fatal result. I do not believe this to be a very common danger.

In some patients who have sustained a severe blow upon the head, there is no fracture of the skull and yet much damage to the cerebrum results. This con-

---

\*Read before the Oklahoma State Medical Association at Medicine Park, May 9, 1917.

sists in hemorrhage, minute or gross, single or multiple, or in such a bruising as to produce a subsequent oedema or necrosis.

In oedema or hemorrhage, the signs of intra-cranial pressure before mentioned are present and in addition ophthalmic examination shows a choked disk. Rarely is it possible to discover changes in the fundus oculi earlier than six hours from the time of the injury but slight blurring of the nerve may be present then and a distinct choke in ten or twelve hours. Ophthalmic examination is useless in extreme shock.

This naturally brings up the question of shock. Immediately after a severe brain injury, the patient is unconscious and shows a varying degree of "shock" as is evidenced by a cold sweat and a feeble pulse of high rate. If the patient does not die in a very short time, the signs of shock pass away and those of cerebral compression supervene. In shock the pulse is rapid, 120 or more, feeble and easily compressed, the respiration is rapid and the blood pressure is lowered. Many patients succumb sometimes during the first twenty-four hours without reacting. It is poor surgery to operate at this time, as the added shock only hastens the fatal termination; but if the patient is to have a chance for recovery, the pulse rate begins to fall, reaching sometimes to 40 per minute, the blood pressure begins to rise, and other signs of cerebral compression, including choked disk, appear. This is the time to interfere and other conditions being favorable, the operation should be done as soon as the decreasing pulse rate reaches sixty. If the operation is further postponed, oedema of the brain, or chronic "wet" brain, may result, ending in a rapidly fatal termination or a permanently diseased brain. The operation to be performed is a subtemporal decompression.

During shock the patient should lie unmolested so far as possible with perhaps a saline drip and coffee enemas.

The post traumatic conditions following an unrelieved damaged brain are chronic headache, lack of resistance to fatigue, vertigo, instability as to employment, and epilepsy.

### LEUKEMIA.

Maurice Packard and Reuben Ottenberg, New York (*Journal A. M. A.*, March 31, 1917), says that the earliest stage of leukemia is unknown and that cases showing no increase in the total number of leukocytes but a relative increase in the lymphocytes have later developed into typical lymphatic leukemia. There is, also, a close resemblance between the blood picture and pathologic lesions of aplastic anemia and those of aleukemic leukemia, a fact which leads to a suspicion that the two diseases have a sort of relationship. In aplastic anemia, a striking feature is the diminution of the granulated leukocytes in the circulation. The probable cause of this has been better understood in the last few years by Selling's studies on benzol poisoning. It seems probable that the agent in aplastic anemia acts somewhat similarly to benzol in destroying the leukocytes. Packard and Ottenberg have recently studied a case of aleukemic leukemia which developed into a typical, chronic lymphatic leukemia. During the leukemic stage a large blood transfusion was performed. The interesting point to which we wish to draw attention is that in spite of the fact that a great number of granular leukocytes were transfused in the patient, these leukocytes had entirely disappeared from his circulation twenty-four hours after the transfusion. That this rapid disappearance of leukocytes is not the exception but the rule, after transfusions in lymphatic leukemia, one of us can testify from observation in several similar cases. There are two possible explanations of this: either the leukocytes were removed from the blood and held in some internal organs or they were destroyed. Only extensive postmortem study can decide, but from the fact one does not find polymorphonuclears in any large numbers in the tissues, the destruction of the leukocytes seems more probable. In the case referred to, the patient was a young child weighing 53 pounds, and the amount of blood transfused, 250 c.c., was estimated to represent about a quarter as much as the patient's own blood.



## FRACTURES OF THE BASE OF SKULL.\*

CURT von WEDEL, Jr., F. A. C. S., Oklahoma City, Okla.

The recent articles of Sharp, Besly, Zimmermann, etc., have shown how appallingly high the death rate from basal fracture is. Besly reports a mortality of 53 per cent in a series of one thousand cases of cranial fracture of any type. With the advent of the automobile the increase of fractures of the base is indeed appalling.

The ordinary treatment of basal fracture is the time honored one of rest, ice cap to head, and morphine if restless. If the patient dies, we say, "Oh, he had a fracture of the base—what else could we expect." It is this attitude of comparative helplessness in the treatment of brain injuries that has allowed these cases to be almost neglected in the general hospitals. It is stated that they all die anyway. This is indeed true, if we procrastinate until the dangerous stage of medullary compression, and even the latter stage of medullary oedema have set in. In fact, any chance a patient might have is taken away by an operation at this late and dangerous period of medullary oedema—the operation being just added shock.

Early operation is advisable not only as a means to save life, but to lessen the danger of post traumatic conditions. How frequently these post traumatic conditions following basal fracture occur, we all know. Such conditions are due either to injury of the brain or to laceration of the brain itself, or in the majority of cases, to unrelieved, prolonged increased intra-cranial pressure resulting in chronic oedematous swollen brains. The fracture per se is not the dangerous factor of contention, but the subsequent hemorrhage, oedema, and resulting intra-cranial pressure.

It is far from the scope of this paper to advise operation in all cases of basal fracture. Indeed, it is to be heartily condemned in the presence of shock or severe medullary oedema. All cases of basal fracture should be carefully watched. Repeated blood pressure readings should be taken. Early, the pressure may be low due to shock, but it gradually rises, especially with a decrease in the pulse rate. These cases should never be operated on in shock, even if several days are allowed to elapse until severe shock has disappeared.

Repeated examination of the eye-grounds should be made as a routine, as it is often the earliest sign of pressure. The nasal half of the disk usually blurs first. The blood pressure should be as frequently taken, as slowly rising pressure is a very significant syndrome. Repeated lumbar puncture with examination for blood is often of great help. Great care, however, should be exercised, as the withdrawal of too large amounts may force the medulla into the foramen magnum, with fatal results.

Reflex changes are very interesting. The abdominal reflexes are usually depressed on the side opposite the cerebral lesion. At the same time a definite chaddock reflex may be elicited. Roentgen rays are of little importance in basal fractures.

Fracture is rarely the important factor in brain injuries. In fact if the fracture be so situated as to allow the escape of cerebro-spinal fluid or blood from within the cavity, an operation might be avoided by the consequent lessening of increased intra-cranial pressure. It is the associated increased intra-cranial pressure either from active bleeding or oedema due to brain injury which causes the trouble. In fact, many of the more severe cases may have no actual fracture. This increased pressure may so impair function and blood supply of the cortical nerve cells, that post traumatic conditions are certain to result. A prolonged increase of cerebro-spinal pressure, even though not severe enough to cause immediate alarming symptoms, may be a forerunner of a chronic oedematous wet brain with its resulting series of very important and often serious sequelae.

\*Read before the Section on Surgery, Medicine Park, May 9, 1917.

It is very important that we be neither too radical or too conservative, as it is but to hasten death to operate during shock. However, in delaying to the stage of medullary oedema, we have so procrastinated as to give our patient little hope of recovery. One of the most frequent causes of post traumatic epileptiform seizures following head injuries, is prolonged unrelieved intra-cranial pressure resulting in chronic wet brains.

Again allow me to emphasize early ophthalmological readings, the taking of repeated careful blood pressures, and careful spinal punctures on all suspicious head injuries. We should operate in the interval between the disappearance of shock and the increasing intra-cranial pressure and resulting medullary oedema. The operation of choice is the simple subtemporal decompression, unilateral or bilateral, with washing out of blood clot if necessary.

---

### TRAUMATIC SHOCK.

The results of experiments on the nature and treatment of traumatic shock, in part as yet unpublished and in part drawn from previous works, are given by F. H. Pike, New York (*Journal A. M. A.*, June 23, 1917). These are of interest in view of possible or probable conditions in the present war. 1. When the sells of the brain and nedulla are deprived of blood for from ten to twenty minutes, a change in the staining reaction of the cells is demonstrable if the brain and upper portion of the spinal cord are removed some minutes after the circulation to the head has been restored. 2. The damaged cells show a greater susceptibility to strychnin. Paralysis and functional failure from strychnin during the recuscitation period occur more readily in the anterior (cephalic) portion of the central nervous system which has been exsanguinated than in the posterior portion where the circulation has been maintained. 3. Such damaged nerve cells will recover if a proper supply of oxygenated blood is provided and respiration, blood pressure, and pulse rate soon become normal. 4. Transection of the spinal cord in the upper thoracic region may be done without fatal results some hours after the circulation is restored. Such transection in animals with intact brain is not usually fatal. 5. But transection is fatal if done soon after a reestablishment of the cerebral circulation or soon after the return of the respiration and blood pressure to normal. 6. Section of the spinal cord in the upper thoracic level lowers blood pressure, but increased blood pressure by clamping or ligating the descending aorta just above the diaphragm will restore the failing conditions if done soon enough. 7. In case of severe damage to the central nervous cells no return of function or only an extremely slow and imperfect return is possible so long as the blood pressure remains low, but the condition may be improved by increasing the blood pressure artificially. The conditions become worse when a fall of blood pressure is brought about by some means which does not involve transection of the spinal cord. While the conditions in animals experimentally used do not coincide in all respects with conditions supposed to exist in traumatic shock from injury not involving the central nervous system directly, the author finds in them strong evidence for believing that some physical damage within the nervous system can be included as one condition of the shock. What the nature of this injury to the central nervous system is Pike does not attempt to say. Porter's views as to the effects of fat embolism as a cause of the shock are suggestive. He has no doubt that the systemic blood pressure of mammals is higher than is strictly necessary for the life of uninjured cells and there is thus a possibility of a factor of safety in the blood pressure of the organism in health. He holds that the general conditions of resuscitation apply also in surgical or traumatic shock which requires some raise of blood pressure.

## APPLICATION OF THE PRINCIPLE OF BONE-GRAFT TO UNRETAINABLE RECENT FRACTURES.\*

M. E. STOUT, M. D., Oklahoma City, Okla.

There is no part of surgery that has fallen so much behind, as that of the Osseous system. On every hand we see men doing expert abdominal surgery, expert gynecological surgery, expert surgery of the ear, of the eye, of the nose, throat, and so-forth, but there are few men doing bone surgery.

We are not taking advantage of the fact that bone can be transferred just the same as skin, or any other tissue. Indeed not until our illustrious Murphy began talking and writing on this subject, did we have any conception of its value. True, a few men in Europe had been doing more or less experimental work for a number of years, but they had not proved the practical use of it, and it was here as it was in many other problems of surgery, for him to demonstrate its practical application. As you all know, he made use of the intra-medullary graft, and was very skillful in the application of it. But for us who are not so expert as he was, it is rather difficult to apply in many cases of small bones, and short fragments.

But, Albee has conceived the inlay method, which is more applicable, and even more scientific, when we consider that it gives exact coaptation, with periostium to periostium, cancellus tissue to cancellus tissue, endostium and marrow to endostium and marrow, which are factors of vital importance in the role of osteogenesis. Albee has not only conceived this method, but has ingeniously invented tools, whereby the work may be done speedily with accuracy, and the least amount of trauma, and I need not say to you that these are points which are very essential to the success of the work.

At this time I shall not consider its application in the treatment of ununited fractures, or fractures of the neck of the femur, two of the greatest fields for it; nor shall I consider its use in Pott's disease, or innumerable other conditions, where it seems to be the only treatment of choice. For in these the method of procedure somewhat differs.

But in simple fractures, that cannot be maintained by external appliances, I know of no greater remedy at our command. Take for example a fractured malleolus or a short fragment of the tibia, fibula or radius. Where can we find a more suitable structure for maintaining its position, than a section taken from this same bone, and simply slid a few inches to bridge the chasm.

The technique of the operation is practically the same whatever the location of the fracture, and consists in making a liberal incision directly over the point of fracture, then with the twin saw cut a section four or five inches long, on one end, and two or three on the other. Remove the short fragment and simply slide the long one down to fill its place, and secure it with kangaroo tendon. Then the short piece may be inserted above to fill the vacancy.

I know that many of us have been accustomed to treating these cases with Lane's plates, wires, and wire nails; but one does not need to be in Albee's clinic long to see many gratifying bone-grafts upon patients that have previously been plated, wired, or nailed, without success. And when we consider that we are introducing a foreign material, and that around every screw and wire or nail there is more or less ischemia and necrosis, we know that they are inclined to predispose to infection to a certain degree, and that they inhibit osteogenesis has been amply proved by the number of non-unions following their use.

On the other hand by the proper use of the graft, we can maintain the position just as accurately and firmly, and not only avoid these sources of danger, but we make use of the greatest stimulating factor known in osteogenesis, that of the autogenous living graft.

But in doing this work it is well to remember that they should not be operated immediately following the injury, as there is always more or less trauma and lacerations of the soft parts around, and about the point of fracture with infiltration of blood which produces an excellent field for infection. But by waiting from six to

\*Read before the Section on Surgery, Medicine Park, May 9, 1917.



eight, or even ten or fifteen days, repair has begun to take place, and there is a marked local-leucocytosis, with a coffer-damming of the tissues which renders them much more resistant to infection.

Now as regards the after care, they should be put in a good heavy cast of generous length, which should be split from one end to the other, so that it may be pried apart to accommodate for swelling. This should be carefully watched for during the first week, with the idea of never allowing the cast to become tight; as the swelling subsides the cast may be easily tightened by drawing it together with adhesive plaster.

We should also inquire for points of pressure and remedy them by fenestras, if they occur. I do not dress the wounds until the cast is removed. The time for this varies from four to six weeks according to the location. We often have a discharge of serum, but this gives no trouble, and should be let alone unless there are signs of infection, which seldom occurs if a rigid technique is adopted; and the closer one keeps to the no-hand-contact of Lane, the fewer infections he will have.

### Discussion.

**Dr. A. H. Bungardt, Cordell:** I feel like emphasizing a few points. We all know that bone work is a part of surgery that gives us the most trouble. We believe there are more damage suits due to ununited fractures and bones than anything else. In a great many cases we must resort to methods that suit the particular case first. I agree with the doctor in regard to the application of Lane splints and your wire, etc., and it has been my experience that these bone grafts gave more or less trouble. A foreign body in a tissue is not a very good thing. An immediate operation after a fracture is bad surgery. It is better to wait a week or ten days until nature has been able to ward off disease and so protect it from infection. I think the inlay graft is the best method of repair and splinting should be very extensive.

**Dr. R. L. Hull, Oklahoma City:** Just to emphasize that this work is practicable only to well equipped hospitals, and there are certain instruments absolutely necessary. There is just one point I want to bring out, that is, we have been compelled to operate on too many patients immediately on account of the restlessness of the patients and friends. We are compelled to do that which in our own judgment we should not do. The method of fixation is applicable in most every case of bone surgery. Dr. Albee has a graft which is called the fish bone graft (draws diagram). It is especially good on the smaller bones. I believe it is being demonstrated that we have not got to use autogenous grafts for this work; that the multiple inlay graft will give you good results that are small in area. I know that as far as getting results are concerned that the multiple inlay graft is satisfactory.

**Dr. Livermore, Chickasha:** I heartily agree with Dr. Stout's paper and it is very applicable in many places. With the X-ray showing the exact position of the bone, we are apt to operate on cases where we would get as good results without operation. I mean by that that the bone does not have to always be exactly set to make good results. Sometimes an X-ray will show that your bones are not exactly placed but they are all right. Bone work is simple work if you are prepared to do it, but it should not be undertaken without the necessary instruments, etc.

**Dr. Stout, closing:** I appreciate the free discussion on this paper, and I am sure that the more expert we become in this work the fewer open operations we will do. And I certainly would never advise open surgery where good apposition can be secured and maintained by external appliances, and even where the apposition is not exact, if we feel sure of a good functional result, I question the wisdom of open surgery, but there are a certain number of cases where the result will be disastrous if we depend upon external appliances alone. And in these cases we must resort to some operative procedure, but I would not have you think that I am advocating this method to the exclusion of all others, for many cases can be best secured by kangaroo tendon alone, and it may occasionally be permissible to use a small wire nail, but the sooner we abandon the promiscuous use of foreign material, and begin directing our efforts toward some other means of fixation, the better we are going to get along.

**JOURNAL OF THE OKLAHOMA STATE MEDICAL ASSOCIATION**

VOLUME X

AUGUST, 1917

NUMBER 8

PUBLISHED MONTHLY AT MUSKOGEE, OKLA., UNDER DIRECTION OF THE COUNCIL

DR. CLAUDE A. THOMPSON, EDITOR-IN-CHIEF

ENTERED AT THE POST OFFICE AT MUSKOGEE, OKLAHOMA, AS SECOND CLASS MAIL MATTER, JULY 28, 1912

THIS IS THE OFFICIAL JOURNAL OF THE OKLAHOMA STATE MEDICAL ASSOCIATION. ALL COMMUNICATIONS SHOULD BE ADDRESSED TO THE JOURNAL OF THE OKLAHOMA STATE MEDICAL ASSOCIATION, 307-8 SURETY BUILDING, MUSKOGEE, OKLAHOMA.

The editorial department is not responsible for the opinions expressed in the original articles of contributors.

Reprints of original articles will be supplied at actual cost, provided request for them is attached to manuscript or made in sufficient time before publication.

Articles sent this Journal for publication and all those read at the annual meetings of the State Association are the sole property of this Journal. The Journal relies on each individual contributor's strict adherence to this well-known rule of medical journalism. In the event an article sent this Journal for publication is published before appearance in the Journal, the manuscript will be returned to the writer.

Failure to receive the Journal should call for immediate notification of the editor, 307-8 Surety Building, Muskogee, Okla.

Local news of possible interest to the medical profession, notes on removals, changes in address, deaths and weddings will be gratefully received.

Advertising of articles, drugs or compounds not approved by the Council on Pharmacy of the A. M. A. will not be accepted.

Advertising rates will be supplied on application. It is suggested that wherever possible members of the State Association should patronize our advertisers in preference to others as a matter of fair reciprocity.

**EDITORIAL****OUR SCHOOLS AS DISSEMINATORS OF DISEASE.**

We called attention last year to a condition ever recurring in the history of our schools, we presume not different from that of other states, and that is the marked increase of certain infectious diseases concurrent with the opening of the school year.

The factors causing this increase are well understood by health officers and physicians as a rule, but the small minimum who do not understand the dangers or who take no active steps to check infections are probably responsible for the increase more than any other one cause.

Dr. Van Cleave of the Indian Service is authority for the statement that at the Tuskahoma school the number of cases of malaria in September were 33, in October 15, and in November 5. All these cases were imported from malarial districts. He is of the opinion that it would not be bad practice to give all the entrants antimalarial treatment as soon as they enter, in order to forestall establishment of the infection generally.

In Pryor a very unusual situation arose. Measles becoming prevalent the town council met and sagely, without the advise of medical authority of course, declared that quarantine was unnecessary, that the disease was harmless, etc. Of course these misguided lawmakers did not know that measles probably killed more children in this state in 1916-17 than either smallpox, scarlet fever or diphtheria. This occurred in the home town of the State's great orphanage, where by reason of the naturally inherited weaknesses the children have they are more than usually susceptible to infections, and where an epidemic of measles would more than likely be followed by death or such severe complications that soon other infections would produce similar results.

In a few weeks many hundreds of schools will again open and we will begin the same old tiresome process of quarantine after an infection has thoroughly implanted itself in a neighborhood. Why not begin now by advising the various school trustees of the dangers? We need our resources at this time for other mat-

ters of great importance, why not conserve them by properly cleaning up the school houses and grounds, pumping the wells dry and treating the suspicious ones with hypochlorite, preparing sanitary, well located and fly proof soil closets, and above all, insisting that sick children be inquired into before their return to school with the possibility of infecting the well? In Oklahoma this latter is the crux of the matter. More infections are spread by teachers, parents and physicians winking at the return of an infected child to school than by any other means. One Muskogee parent probably stated correctly the attitude of a certain class when she heartlessly exclaimed, "Well! Why should she not return to school? Was she not infected there?"

### WILL THE GOVERNMENT DRAFT PHYSICIANS?

There are indications that such a step may be found necessary. If reports are to be credited, the War Department is not securing the number of physicians they deem sufficient and the general unrest as to that phase of the matter is already reflected in the action of some medical organizations, which in effect suggests that such a step be taken.

To carefully consider the matter, it has been suggested that a meeting of the state committees on medical defense be held and that they endorse the proposition to apply some system of selective draft to the medical profession in order to secure the necessary number of men. Maryland has already taken this step and endorsed the move. The suggestion carries the idea that the General Medical Board of the Council of National Defense would, if it met the approval of the Surgeons General of the Army, Navy and Public Health Service, present the matter to Congress and ask that the necessary legislation be adopted.

We have always held, since the selective draft has been in process of organization, that the age limit should have been more than 31 years—45 years would have worked no injustice, for, those not physically fit or otherwise unsuited for service by reason of dependents or situation as to vocation could have been excluded as they are now excluded, but that limit would have done something devoutly to be wished in many localities, and that is the forceful securing of a certain worthless class of loafers and spongers who have never been of service in any capacity to either the city, state or Nation. This description in no wise applies to physicians or our profession as a class, but does apply to many individuals who are mere excrescences on civilization, who for years have ornamented our street corners, pool-halls and police courts, paying no taxes, creating no worthy thing, having no ideals or noble aims for the future, rarely any interest in the affairs of the country which gives them a right to idleness and wastefulness. What nobler end could they come to than in one of our National cemeteries, where under the sod, they would be oblivious to the sympathetic hands decorating the graves of our sainted dead.

Now if Congress passes an act calling for physicians, it is doubtful if they can get a law not applying to one age alike. If they want 45 or 50 year old doctors, they must probably provide in the act for the same age as to other vocations and professions.

Every physician must, of course, determine his own course of action in this matter. Many who others think should go have affairs which the neglect of or absence from will be badly injured by leaving their work. This especially applies to physicians heavily in debt who have no means of relieving the claims on them except to keep at the eternal grind of private life and toil. Those having large families must necessarily, in the absence of accumulated savings, remain at home. Those who can arrange their affairs, even to the extent where the going means much sacrifice, should arrange them at once and apply to the authorities for examination and assignment.



## VOLUNTEERING FOR SPECIAL WORK.

There is an impression among physicians that they may offer their services to the War Department, reserving to themselves the kind of work they will perform. Many physicians are inquiring if they may be commissioned for the performance of certain services. They cannot be. When a physician is commissioned he must perform the service he is ordered to perform, which of course, is in keeping with the services performed by other medical officers similarly placed.

The government is attempting to secure for medical officers, well balanced, capable men;—men who with little effort can fill any ordinary position they may find themselves in, consequently an offer with a string to it, one suggesting that the volunteer will tender his services provided he is to be sent to France, or if given some preferential position, is simply no offer at all.

## THE OSTEOPATH WANTS TO GO.

It is said some soul in Washington, some great legislative mind with the "good of our fighting men at heart" is proposing that a certain number of osteopaths be attached to the military arm as medical officers. It is not said the osteopath is stimulating this great demand, but every one may draw his own conclusions. While drawing do not forget the great call for this particular species that has not yet been heard reverberating from the fields of striving Europe, which so far has been able to strive along in some manner without the aid of these skilled adjusters. We hardly think the Congress will make Americans the laughing stock of efficient medical Europe by sending along clowns, Christian Scientists and healers with the divine touch, but if we are to send a joke, let's send a real laughable one. It would fit the occasion to send one each of the following indispensable cults: Osteo-chiro, Christian Scientist, magnetic healer, mesmerist, holy roller, etc., and if at the last moment some great field is discovered as having been overlooked, include one of of that tribe too.

## CURRENT MEDICAL LITERATURE

Conducted by

DRS. CURT von WEDEL, Jr., and L. J. MOORMAN, Oklahoma City  
and FRED J. WILKEMEYER, Muskogee

### CHOLECYSTECTOMY.

By Major G. Seelig, St. Louis, Mo.

(Surgery, Gynecology and Obstetrics, July, 1917.)

In a rather extensive article, the author takes up the question of the best method of technic for cholecystectomy. He states that many times it is more difficult to excise the gall bladder from the cystic duct outward, than it is by the old method of grasping the fundus and stripping it downward. He believes one reason there are more reported injuries of the hepatic and common ducts in this country than in Europe, is because of the prevalent use of the method of removing the gall bladder from the cystic duct outward. He thinks it is easier to successfully ligate the cystic artery by his method, and that by holding upon the cystic duct, one may easily be able to probe the hepatic and common ducts with a copper probe. It is a mistake to ligate the artery and duct in a mass. Each should be ligated separately.

His method of procedure is as follows: The gall bladder is grasped, the incision made on each side of the gall bladder and it is then stripped downward (compressing the liver if there is any oozing), until the main trunk of the cystic artery is reached, which is then ligated. The cystic duct is clamped above, cut, and the edges of the stump are grasped by fine artery forceps and the ducts probed. The stump is then ligated and a drain placed above the foramen of Winslow. In this same paper he mentions an incision which commences at the ensiform and runs downward over the belly of the rectus muscle. The anterior sheath is opened to the full extent, and the rectus contracted outward. He believes that by this method a much better exposure can be obtained.

# **PULMONARY FAT EMBOLISM—A FREQUENT CAUSE OF POST-OPERATIVE SURGICAL SHOCK.**

By Wayne W. Bissell, Rochester, Minn.

(Surgery, Gynecology and Obstetrics, July, 1917.)

Death following operation associated with rapid pulse and a fall in arterial pressure with a rise in venous pressure is usually accredited to so-called surgical shock. The author believes, however, that many of these deaths, if autopsied, would be shown to be due to fat embolus.

He discusses in detail three autopsies of fatal cases, and states in conclusion that:

1. Deaths clinically supposed to be due to surgical shock are due, in so far as this experience goes, to pulmonary fat embolism and its attendant blood pressure phenomena.
2. Pulmonary fat embolism causes a lowering of arterial blood pressure and an elevation of venous blood pressure which may be sufficient to cause death.
3. Infusions (intravenous) are contra-indicated, because of the increased pressure on the right heart.
4. By simple methods pulmonary fat embolism is easily demonstrated at necropsy.

## **PERSONAL AND GENERAL NEWS**

**Dr. C. M. Robinson**, Stilwell, has moved to Nowata.

**Dr. T. B. Hinson**, Enid, is doing special work in Chicago.

**Dr. A. L. Stocks**, Muskogee, is doing special work in Rochester.

**Dr. and Mrs. H. C. Manning**, Cushing, are visiting in Kentucky.

**Dr. and Mrs. J. E. Yarbrough**, Erick, have returned from Chicago.

**Dr. Geo. H. Nieman and family**, Ponca City, are visiting in Colorado.

**Dr. I. D. Walker**, Antlers, has returned from post-graduate work in Chicago.

**Dr. O. C. Coppedge and family**, Bristow, are touring Colorado by automobile.

**Dr. G. A. Kilpatrick**, McAlester, has returned from a visit to the Mayo Clinic.

**Dr. and Mrs. V. H. Barton**, McAlester, motored to eastern Texas points in June.

The **Oklahoma Baptist Hospital**, Muskogee, is having plans drawn for a \$30,000.00 addition.

**Dr. and Mrs. Phil Herod**, El Reno, recently made an automobile trip to Clovis, New Mexico.

**Dr. J. Lee Riley**, Henryetta, has been commissioned as 1st Lieutenant, Medical Reserve Corps.

**Dr. J. W. Board**, Okenah, is moving to Guthrie, where he will be associated with Dr. Lovelady.

**Dr. J. M. Bonham**, Hobart, has returned from an extended trip to Chicago where he took special work.

**Dr. Benjamin Brown**, Muskogee, has been commissioned as Captain in the Medical Reserve Corps.

**Dr. F. Y. Cronk** is moving from Guthrie to Tulsa, where he will be associated with Dr. Ralph V. Smith.

**Dr. J. H. Woodcock**, Muskogee, has moved to Miami where he will be associated with Dr. J. D. Bewley.

**Dr. C. Z. Wiley and family**, Tulsa, are visiting Dr. A. Ray Wiley at the New York Polyclinic Hospital.

**Dr. G. M. Rushing and family**, Durant, motored to Alabama points where they are visiting relatives.

**Dr. George Hunter**, city physician, Oklahoma City, has advised the people of that city to boil their drinking water.

**Dr. H. H. Cloudman**, Oklahoma City, has been reelected school physician, a position he has held for several years.

**Dr. J. W. Moore**, Addington, has suffered severely for some weeks with an infection of the hand. He is now improving.

**Dr. N. W. Mayginn** and family, Tulsa, are touring Colorado and Northwestern points. They will not return until cold weather.

**Dr. J. F. Messenbaugh and family**, Oklahoma City, are in Colorado Springs. After a time Dr. Messenbaugh will visit the Mayo Clinic.

**Dr. L. C. Kuyrkendall**, McAlester, who is now attached for training at Ft. Bliss, Texas, has been confined to quarters with scarlet fever.

**Dr. Ed. D. James**, Haileyville, has sold out and will move to some Missouri point. Dr. James has been located in Haileyville for fifteen years.

**Dr. S. P. Strother**, for many years located in Altus, is moving to Holdenville, where he will have charge of the newly organized Holdenville Hospital.

**Dr. Thos E. Shepard**, Tulsa, announces he will not contest the decision of the Oklahoma State Board in revoking his license. He will retire to private life.

**Drs. E. E. Rice**, J. A. Walker, H. A. Wagner and T. D. Rowland, Shawnee, have passed the Medical Reserve Corps examination and are awaiting orders.

**Dr. G. C. Croston**, Sapulpa, has filed suit against the county commissioners of Creek county, alleging the abrogation and non-payment of his services as jail physician.

**Dr. R. L. Kurtz**, Nowata, has announced that owing to his acceptance of a commission as Captain in the Medical Reserve Corps, the Nowata Sanatorium will be closed.

**Dr. C. V. Rice and family**, Muskogee, are in Chicago for six months where Dr. Rice has secured an appointment for that time in order to make a special study of pediatrics.

**Medical Officers** of the 1st Oklahoma Infantry were ordered for physical examination at Oklahoma City, July 23. This examination is preparatory for final entry into Federal service.

**Drs. E. A. Campbell**, Heavener, S. D. Bevill, Poteau, and R. L. Kurtz, Nowata, have received commissions in the Medical Reserve Corps. The former two as lieutenants, the latter as captain.

**Armour and Company** announce the preparation of 1-2 cc. ampoules of pituitary liquid in order that physicians demanding smaller dosage may be accommodated. The new package comes 6 ampoules in a box and retails for 65 cents.

**Dr. J. D. Osborn**, Chairman Tillman County Red Cross, announces that "Four Minute" men will be selected to make addressess of that length between the acts at picture shows. The talks will cover all ranges of Public Health activities.

**Dr. John W. Duke**, State Commissioner of Health, has given notice that license for 1917 was due July 1st from hotels, rooming houses, restaurants, drug stores, drink fountains, confectioneries, fruit stores, groceries, meat markets and bakeries.

**Dr. D. C. Sanders**, Boswell, charged with unprofessional conduct in that he offered to cure and accepted fees for such, in the matter of incurable diseases, was exhonored by the State Board of Medical Examiners at the Oklahoma City meeting.

**The Oklahoma Baptist Hospital**, Muskogee, held its annual commencement exercises June 26. The graduates were Misses Grace Hill, Gertrude Hamilton, Lydia Scharmacher, Pauline Kennedy, Margaret Bunge, Vera Dunlap and Lillie Blanchard.

**Medical Reservists Accepted.** Drs. B. T. Bitting, Enid; W. J. Omer, Thomas; C. M. Ming, Okmulgee; T. F. Renfrow, Billings, have been commissioned in the Medical Reserve. Dr. Bruce Watson, Perry, will move to Billings to look after the work of Dr. Renfrow during his absence.

**The State Laboratories** will not be moved from Guthrie at this time, it is announced. It was hoped to have them housed in the new State Hospital, but as the appropriations for that have been tied up, the removal may be deferred for some time yet, or until arrangements can be made for proper quarters.

**Dr. C. Howard Davis**, of Toltec, Arizona, for many years a McIntosh county physician, visited Oklahoma in June. Owing to the fortunes of war Dr. Davis, who was surgeon for one of the Mexican Railways prior to the Mexican Civil War, has experienced many thrilling adventures and suffered vicissitudes not usually accorded to man.

**Drs. J. L. Patterson**, Mutual; Fred Patterson, Fargo; and F. H. Racer, Woodward, have passed examination for the Medical Reserve Corps. Applications have been made by Drs. T. D. Triplett, Moreland; C. E. Davis, Woodward; C. J. Forney, Woodward; and C. W. Tedrowe, Woodward. Probably no county in this or any other state has offered as high a percentage of its physicians as this.

**The School for the Blind.** An additional building at the School for the Blind was provided by the last legislature. In a short time the School will be able to receive thirty or forty new pupils. The management of the School would call the attention of the public to the fact that the School for the Blind is a state institution and that it was established for the education of not only those who are totally blind, but for those who, while having some vision, are unable to attend the public schools. It is requested that any one having a child so afflicted, or having knowledge of such a child, write to the school for information. Address O. W. Stewart, Superintendent, School for the Blind, Muskogee, Oklahoma.

#### DR. RALPH F. KOONS.

**Dr. Ralph F. Koons**, El Reno, for many years located in that city, died Sunday, July 7, after an illness of short duration. Death was due to uremia. Dr. Koons was born at New Columbus, Ohio, January 6, 1876. His preliminary education was obtained at Bucknell University, his medical at the University of Michigan, graduating in 1901. During his busy life he had held internships in The Marine Hospital Service and for a time was secretary and superintendent of Canadian County Board of Health and was a veteran of the Spanish-American War. He was married in 1906 to Miss Maude Conklin, who survives him, and he leaves three children. Dr. Koons, it is said, enjoyed a large practice in El Reno and Canadian County.



**Dr. S. O. Taylor**, Ringling, is attending the New Orleans clinics.

**Dr. A. M. Chambers and family**, Quinton, are motoring to New Mexico.

**Dr. Benjamin Skinner**, Pawhuska, is doing special work with the Mayos.

**Dr. M. M. Webster**, Stratford, was seriously crippled recently when thieves drove away with his Ford.

**Dr. G. W. Taylor**, El Reno, has been appointed county health officer, vice **Dr. R. F. Koons**, deceased.

**Drs. Harry Sims and Fred Fannin**, Stigler, have passed their examinations for the Medical Reserve Corps.

**Dr. and Mrs. J. C. Watkins**, Checotah, have returned from a four months visit to Chicago where **Dr. Watkins** spent his time doing special work.

**Dr. J. A. Muller**, formerly of Snyder but for some time in El Paso, Texas, with the M. R. C., has been advanced to a Captaincy and ordered to San Antonio.

**Dr. Robert I. Allen**, Nowata, and Miss Maude Elizabeth Oschman were married in Claremore, July 16th. They will be at home in Claremore after September 1st.

**Dr. R. L. Hall**, Pawhuska, a member of the Oklahoma Senate and one of the men more than ordinarily responsible for the enactment of the definition of practice act, has sold out his Pawhuska ranch. It is said the price was \$137,000.00.

**Dr. J. M. Bonham**, Hobart, is going to try to make a "loose mouthed" chiropractor pay for his scientific statements anent the administration of antityphoid vaccine. The Chiro, it is said, circulated or caused to be circulated statements that the administration was injurious to certain patients of **Dr. Bonham's**, and he will now have an opportunity to show in court how much he really does not know about such things.

**Dr. Thomas E. Shepard**, Tulsa, faced charges of unprofessional conduct as the result of an alleged criminal operation which caused the death of Loyce Smith of Tulsa, brought before the State Board of Medical Examiners. The Board revoked the license. Prior to this time **Dr. Shepard** had been arrested, but was released at the preliminary trial. Tulsa County authorities have refiled the charges and after arrest the prisoner was released on bond.

**Dr. Emma Starr Keith**, Muskogee, has been appointed school examiner. The appropriation for this appointment has been made from year to year for some time, but the school board, in its infinite wisdom, has heretofore not deemed it of sufficient importance to fill this important position. A slowly increasing prevalence of infections incident to school environment, the last few months, has blessed Muskogee with more measles and similar contagions probably than any other locality in the State.

**The Prussian War-Lord's Voice.** "Barbarians understnad war better than we Europeans. They have no rules, no code, no conventions in war. Kill your enemy in any way you can, and when you have killed him in sufficient numbers that he can no longer resist you, enslave him—that is the barbarian theory of war, and that is the right one."—Statement made by Von Hindenberg in an interview given before the war to **Capt. Armanthos Kaftan-Oghiou**, for many years legal adviser of the Turkish embassy in Berlin.

"All Gaul is divided into three parts," said Caesar. Well, Caesar, you were reckoning from poor premises. You overlooked some gall in Oklahoma when you laboriously penned your commentaries. The Chiropractics state they have made application to the proper authorities to organize a unit for war service. They do not say just what the service is or could be, just one fell word, covering the whole gamut "service" is used. We can see Generals Gorgas, Braisted and Blue hurrying about Washington, all other activities of their offices at a standstill, as they congratulate themselves on this successful addition to the departments and prepare for the early advent of these wonderful scientists, who have only to twist the spine of the typhus patient, the tetanic sufferer, the gas poisoned victim, in order to send him back to the trenches fit to fight after one little "adjustment" or so. It is said that with this offer it will not be necessary to further enroll physicians for war service. So far as surgical and medical activities go the United States will be "prepared."

**The Oklahoma Council on Defense** has this to say concerning certain interesting phases of its work:

#### **The Call to College.**

During this war and following it there will be such a shortage of college trained men and women as has never before been known. Federal authorities are urging that young men and women be kept in colleges and universities until their services are absolutely necessary to the national defense.

The best interests of the nation demand that the supply of college trained men and women be kept up. Europe, with most of her universities closed and with hundreds of trained men already killed in the trenches, is looking to America for relief. And wonderful opportunities await the young man and the young woman who are technically trained.

Oklahoma Council on Defense.

## SOCIETIES

**Oklahoma County Dental Society** has offered to treat such recruits as may need their services, without charge.

**McIntosh County Medical Society** met in Checotah July 3 with the following program: "Normal and Pathologic Labor," W. D. Berry, Muskogee; Clinics and Case Reports.

**Oklahoma City Medical, Dental and Veterinarian organizations** are perfecting plans for the establishment of a library to be incorporated in the present Carnegie Library. Drs. J. S. Hartford and W. H. Bailey represent the Medical profession in the matter.

**Rogers County Medical Society** meeting at the summer home of the president, Dr. Walter E. Smith, of Collinsville, passed a resolution assessing \$5.00 monthly from each member, the sum to go toward the payment of fifty dollars per month to physicians of the society who go to war.

**Marshall County Medical Society** held a meeting July 3 at Kingston, Dr. T. A. Blaylock, Madill, presiding. The program: "Medical Organization," A. E. Ballard, Madill; "Intestinal Autointoxication," Dr. Dickerson, Aylesworth; "The Fee Bill and Ethics," J. A. Rutledge, Woodville; "Throat Infections and the Accessory Sinuses," O. E. Wellborn, Kingston.

**The State Board of Medical Examiners** elected the following officers at the July meeting: President, J. J. Williams, Weatherford; Secretary, R. V. Smith, Tulsa; Vice-President, M. Gray, Mountain View; Treasurer, O. R. Gregg, Freedom. The election of Dr. Smith was made to hold until the next meeting by which time he will probably be attached to the Medical Reserve Corps, necessitating another election for that office.

**The Stephens County Medical Society** held a very interesting meeting at Duncan, June 27th. The attendance was the largest had for some time. Most of the day was spent in discussing "Our Bit in the War." The duty of those that remain at home towards those that go to the front and risk their lives and sacrifice their practice for their country's cause and the future liberty of their children was the paramount issue. The Oklahoma County plan, with some modifications, was adopted. While none volunteered their service, it was freely expressed that Stephens will furnish her quota.

#### Mid-summer Meeting of the Central Oklahoma Medical Association

##### —Secretary's Report,

Ione Hotel, Guthrie, Okla., July 10, 1917,

Meeting called to order at 2 p. m. After reading of the minutes the scientific program was taken up at once.

The Address of Welcome by Dr. A. A. West of Guthrie was in the form of a clinic, in which he presented two cases of residual paralysis following Infantile Paralysis and one case of birth dislocation of the shoulder.

Dr. A. J. Coley of Oklahoma City gave a very interesting paper on Summer Diarrhoea of Babies, in which many valuable points were brought out.

Dr. C. B. Barker of Guthrie had a large Eye and Ear Clinic, in which he showed about a dozen different conditions which proved of much interest, especially to the eye and ear specialists present.

Dr. W. E. Dicken of Oklahoma City reported a case of Ovarian Calcification and exhibited the specimen. Reports of this condition are rare in the literature, but the discussion brought out the fact that a number of men had had similar cases.

Dr. J. H. Maxwell of Oklahoma City reported a case of Hepatic Abscess following a Ruptured Appendix, in which he made a strong appeal for more accurate diagnosis and early operation.

Dr. C. J. Fishman of Oklahoma City reported a case of Spleno-Myelogenous Leukemia, which showed a marked remission following vaccination for small-pox.

During the recess which was taken at 4:30 p. m., the profession of Guthrie gave an auto ride to the visiting physicians to the hospitals, where light refreshments were served, and to other places of interest, ending at the Municipal Bath-house, where most of the visitors enjoyed a swim in large pool. All met at the Ione Hotel for dinner at 6:30 p. m.

Evening session was called to order at 8:00 p. m.

Dr. Rex Bolend of Oklahoma City gave a very instructive talk on the Duties of the Medical Reserve Officers, in which he pointed out that unless the physicians responded better the government would probably have to draft them.

The paper on Fractures of the Neck of the Femur by Dr. M. E. Stout of Oklahoma City brought out a lot of discussion and many questions were asked about the technic of the bone-graft operation.

Dr. C. D. Blachly of Drumright explained a very clever method of marking X-ray plates by writing the data on the envelope with an ink made of glue and lead filings before the exposure is made.

Dr. A. P. Gearhart of Blackwell reported three cases of Meckel's Diverticulum, one of which was diagnosed before operation.

Dr. W. A. Fowler of Oklahoma City gave some very valuable suggestions in a paper on Uniform Routine for Management of Obstetrical Cases.

Dr. W. Eugene Dixon of Oklahoma City read a paper and reported some cases of the Antrum as a Focus of Infection.

The meeting adjourned with a vote of thanks to the management of the Ione Hotel and the Logan County Medical Society.

Dr. W. H. Bailey, Sec'y.

## MISCELLANEOUS

DEPARTMENT OF PUBLIC HEALTH,  
Dr. John W. Duke, Commissioner, State Laboratories,  
Guthrie, Oklahoma.

### DIRECTIONS FOR MAKING BLOOD SMEARS FOR MALARIAL EXAMINATION AND DIFFERENTIAL BLOOD COUNTS.

1. If Malarial examination is wanted, specimens should be taken, if possible, shortly before a chill, but never within less than ten hours after one. In typical cases, take at time of lowest daily temperature.
2. Specimens should be taken before quinine is administered.
3. The slides must be perfectly clean and free from fat. Thorough washing with soap and water and rubbing with alcohol will usually suffice.
4. Cleanse the lobe of the ear (or finger) with alcohol.
5. Work must be done quickly before coagulation begins.
6. Prick the skin deeply to ensure a free escape of blood and discard the first drop or two. Allow a small drop to flow on a slide near one end. A second slide is held at an angle of 45 degrees to the first one and touching the drop of blood. Allow the blood to spread out by capillary attraction along the edge of the second slide. Then quickly draw the blood along the first slide with a clean sweep, exerting little pressure. Dry in air.
7. In sending blood smears to the laboratory, three slides are desired. For Malaria examination one smear should be thicker than the others.
8. Protect well in a wooden or tin box and send by mail to the State Board of Health, Guthrie, Oklahoma.
9. Slides will be sent upon request.

### PREVENTING BABY BLINDNESS.

The new vital statistics law for the state of Oklahoma will go into effect on July 1st. Not only will this law result in fuller and more accurate vital statistics, but it will also have the effect of reducing infant blindness in Oklahoma. Every physician making out a birth certificate will be urged to use a harmless solution on the eyes of each baby, a solution which is a practically certain preventive of infant blindness.

No more terrible tragedy can be imagined than a life of total blindness, and this tragedy is the more pitiable because in so many cases it is absolutely unnecessary. It is a conservative estimate that three-fourths of the cases of infant blindness could easily have been prevented. The operation of using the solution in question is a simple and painless one, but it should be done only by a physician or trained nurse. One of the most important factors in preventing infant blindness is to take this precaution in time. The right way and the only way is to use it on the eyes of all babies at the time of birth. In any case, if the slightest symptom of sore eyes appears the mother or person in charge should report the matter to a physician without the slightest delay. Often a small delay means the difference of the baby preserving its eyesight or being blind for life. A few years ago the value of this solution was not realized. Now there is no excuse for any physician failing to use this certain and simple precaution against infant blindness.

### MEASLES TOO PREVALENT.

Measles continues to be far too prevalent in Oklahoma. The unusually large number of cases reported proves that parents do not yet realize what a really dangerous disease measles is and how important it is to take precautions to guard against possible attacks. Not only has measles been more prevalent, but the recent epidemics have been of a virulent nature. During a single month measles was the direct cause of over fifty deaths in this state. It was a contributing cause of about half as many more. When it is considered that measles is not generally regarded as one of the typically dangerous diseases these figures are striking. The way to prevent measles is not to expose children to infection. If there is the slightest suspicion that a child has measles, it should be kept separate from other children. And it should be remembered that measles is infectious before the disease reaches the severe stage. Aside from the direct danger measles often causes permanent after effects, the most common and serious being deafness.

### SPLENECTOMY

After describing the functions of the spleen as far as known and stating the presumed cause of spenic anemia, W. D. Haggard, Nashville, Tenn., (*Journal A. M. A.*, July 14, 1917), reviews the conditions in which splenectomy is indicated or has been used, other methods having been ineffective. As



regards the important question of the operation in pernicious anemia he says the best results seem to have been obtained in persons below 50 who have had the disease less than a year, in whom the blood picture is fairly good and the spleen is moderately enlarged. Mental, cerebral and spinal cord symptoms are distinct contraindications, and the presence of an aplastic bone marrow is equally forbidding. Hemolytic jaundice is the most promising of all conditions that are benefited by splenectomy and he suggests that certain cases of so-called Hanot's hypertrophic cirrhosis in young life that lasts a number of years may be really acquired hemolytic jaundice, as Mayo suggests. All chronically enlarged spleens producing symptoms should be exhaustively investigated to show why they should not be removed.

#### WHOLESOMENESS AND ECONOMY.

The Nation is at war. To protect our rights we must have an efficient fighting machine. The men must be given wholesome and nutritious food in sufficient quantity. The stupendous character of the conflict necessitates rigid economy of both men and material. Nothing is economy that renders food less wholesome but there is no excuse for catering to prejudice at an increased cost. We shall need all our dollars before this war is over. We must secure for our soldiers the most wholesome food at the least cost.

Our governmental departments are subject to criticism by the whole country and it would not be surprising if they catered to known prejudices in order to avoid annoying criticism. But in time of war we must be governed by scientific facts and not by prejudice. Big interests whose advantage lies in the support of a prejudice may criticise, but our leaders must be big enough to practice economy in spite of such unjust criticism. That economy will be practiced and that scientific facts and not prejudice will guide the government in the selection of wholesome foods is clearly indicated by recent actions by the Department of the Interior, the Army and the Navy. All these departments have recognized the findings of the Referee Board of Scientific Experts who found that alum baking powders were as healthful as any other baking powders. These departments have recently purchased large quantities of alum phosphate baking powders. This is the type which was furnished our soldiers on the Mexican Border and subsequently to our sailors and which proved so satisfactory. The people of the United States have recognized the wholesomeness and economy of this type of baking powder for years. Eight per cent of the baking powder used in the United States contains alum. Its wholesomeness is unquestioned. Its economy is marked. Not only are alum powders generally much stronger, so strong that the manufacturers recommend the use of only half the quantity called for by high priced baking powders, but the price of the powder pound for pound is but half as much. This means that the use of one pound of phosphate alum powder at 25 cents does the work of two pounds of the other powders costing one dollar. The saving is 75 cents. War prices would have no terrors if we could make an equal saving on all our foods by substituting something equally wholesome, twice as effective and at half the price.

#### SANITATION IN THE TRENCHES

The sanitary problems that have had to be specially met in the present war are taken up by C. C. McCulloch, Washington, D. C., (*Journal A. M. A.*, July 14, 1917), who remarks on the paucity of literature on these subjects. He has been informed by competent observers from the western front that the German sanitary methods and results are far behind those of the British and French and he says there seems to be some evidence that the medical department of the German army, owing probably to the use of antiquated administrative methods, practically broke down in the early part of the war. Realizing the literary lack of the medical Section of the Advisory Committee on National Defense has decided to have published as early as possible a pocket handbook designed for easy use in the field, treating of the more essential subjects both from English sources and French translations and short monographs on special subjects, written mostly by some of our own physicians who have seen service in the war. Pending this publication which will probably require several months for completion, the want can be partially filled by short journal articles on the more important subjects and this is the reason for the publication of the present paper which, however, can hardly be called a short one. He refers to the sources of his article and the works that can be consulted. The general principles as adopted behind the front are practically the same as the old established sanitary measures. The vital things in military sanitation are (1) food, (2) water, (3) conservancy, (4) personal habits, and (5) the prevention of special disease. Each of these points is taken up in more or less detail, as well as the important disease problem of the present war, such as tetanus, gas gangrene, frost bite, trench fever, gas poisoning, cerebrospinal fever, malaria, etc. He says in conclusion that the sketch is not by any means intended to cover all the the ground of military medicine and all the diseases of camps and armies, which could not well be included in a journal article. What he has hoped for is the arousing of the interest of some of our prospective young medical officers and stimulating them to further studies.

#### THE COUNCIL ON PHARMACY AND CHEMISTRY.

Accepted for Inclusion with New and Non-official Remedies:

**Borcherdt's Malt Olive**, Borcherdt's Malt Extract Co.

**Lipodine "Ciba,"** A. Klipstein & Co.

**Pasteur Antirabic Preventive Treatment** (Harris Modification), Eli Lilly & Co.

**Citresia**, Horace North.

**Hay Fever Pollenin Fall-Mulford.**

**Hay Fever Pollenin Spring-Mulford**, H. K. Mulford Company.

## NEW AND NON-OFFICIAL REMEDIES.

**Kephalin-Armour.**—The hemostatic phosphatid obtained from spinal cord and brain tissue of mammals. It is essentially the same as Brain Lipoid, N. N. R. For a discussion of the actions and uses see *New and Non-official Remedies*, 1917, p. 124, under "Fibrin Ferments and Thromboplastic Substances (Kephalin)." Kephalin-Armour is applied freely to bleeding or oozing surfaces in 1 to 2 per cent. suspensions in physiological sodium chlorid solution. Armour and Co., Chicago (*Journal A. M. A.*, June 2, 1917, p. 1625).

**Thorium Nitrate.**—A white substance, very soluble in water and alcohol. Soluble thorium salts resemble alum in their local astringent and irritant properties. They are not absorbed from the alimentary canal. The non-precipitant double salts of thorium are practically non-toxic, even intravenously. Thorium salts are fairly radioactive.

**Thorium Sodium Citrate Solution.**—Prepared by dissolving thorium nitrate, 10 gm., and sodium citrate, 15 gm., in water, neutralizing with sodium hydroxide and diluting to 100 cc. Being impervious to Roentgen rays, the solution is used to obtain cystograms of the renal pelvis and urinary bladder.

**Thorium Solution for Pyelography—H. W. and D., 10 per cent.**—It is the same as thorium citrate solution. Prepared by Hynson, Westcott and Dunning, Baltimore, Md.

**Stronger Thorium Sodium Citrate Solution.**—Prepared by dissolving thorium nitrate, 15 gm., sodium citrate, 22.5 gm., in water, neutralizing with sodium hydroxide, and diluting to 100 cc. It is used for obtaining urethral phylograms.

**Thorium Solution for Pyelography—H. W. and D., 18 per cent.**—It is the same as thorium citrate solution. Prepared by Hynson, Westcott and Dunning, Baltimore, Md. (*Journal A. M. A.*, June 16, 1917, p. 1817).

**Betanaphthol Benzoate—Anthony-Hammond Chemical Works, Inc.**—A brand of betanaphthol benzoate which complies with the N. N. R. standards for this drug. Anthony-Hammond Chemical Works, Inc., New York City.

**Calcium Cacodylate.**—The calcium salt of cacodylic acid containing from 43.5 to 48 per cent of arsenic in the form of cacodylic acid and free from arsenite, arsenate and monomethylarsenate. It has the mild arsenic action of cacodylates. Calcium cacodylate is white, almost odorless, and very soluble in water.

**Ampuls Calcium Cacodylate Solution—Mulford.**—Each ampule contains calcium cacodylate 0.045 gm. in 1 cc. The H. K. Mulford Co., Philadelphia, Pa.

**Chlorazene Surgical Cream.**—It contains chlorazene, 1 gm., in 100 gm. of a base composed of sodium stearate, 15 per cent, and water 85 per cent. The Abbott Laboratories, Chicago.

**Borcherdt's Malt Extract with Cod Liver Oil.**—A liquid composed of cod liver oil, 20 per cent., and Borcherdt's Malt Extract Plain, 80 per cent. The Borcherdt Malt Extract Co., Chicago.

**Borcherdt's Malt Extract with Creosote.**—100 cc. contain beechwood creosote, 4 minims per fluidounce, in Borcherdt's Malt Extract Plain. The Borcherdt Malt Extract Co., Chicago.

**Borcherdt's Malt Extract with Cascara Sagrada.**—100 cc. contain cascara sagrada, 60 grains per fluidounce, in Borcherdt's Malt Extract Plain. The Borcherdt Malt Extract Co., Chicago (*Journal A. M. A.*, June 23, 1917, p. 1911).

**Lipoiodine-Ciba.**—The ethyl ester of iodobrassicic acid containing 41 per cent of iodine. Lipoiodine-Ciba is odorless, tasteless, insoluble in water but very soluble in fatty oils. When administered, it is absorbed almost completely and excreted more slowly than inorganic iodids but more rapidly than with other iodized fats. It is said to be less likely to produce gastric irritation than ordinary iodids. It is supplied only in the form of Tablets Lipoiodine-Ciba, 0.3 gm. A. Klipstein and Company, New York (*Journal A. M. A.*, June 30, 1917, p. 1985).

## PROPAGANDA FOR REFORM.

**Some Misbranded Cough Remedies.**—The following "cough remedies" have been declared misbranded under the U. S. Food and Drugs Act, chiefly because the curative claims made for them were found to be false and fraudulent: Barker's Remedy for Catarrh, Coughs, Colds and Rheumatism is essentially sugar and water with a small amount of cubebs, potassium iodid and creosote. Mathieu's Cough Syrup, formerly called Syrup of Tar and Cod-Liver Oil, containing little, if any, tar and no cod-liver oil, but containing alcohol, chloroform, creosote and menthol. Forrest's Juniper Tar, containing alcohol, petroleum and oil of tar. Terraline Plain, found to be simply liquid petrolatum. Terraline with Heroin, found to be liquid petrolatum with heroin. Classe's Cough Syrup, a syrup containing alcohol, glycerin, tolu and wild cherry, and having an odor of tar. Essence Menthol-Laxene, containing alcohol, menthol, ammonium salts, chlorid, sugar, drug extract and an unidentified alkaloid. Brown's Acacian Balsam, containing alcohol, acacia, nitrate, licorice, meconic acid, tritrates, reducing sugar, sodium and potassium compounds. Sykes' Sure Cure for Catarrh, containing potassium chlorate, ammonium chlorid and small amounts of alcohol, hydrastin and methyl salicylate. Warner's White Wine of Tar Syrup, containing opium and alcohol, no tar and but an insignificant amount of wine. Rawleigh's Golden Cough Syrup, containing alcohol, chloroform, menthol, guaiacol and perhaps horehound. Rawleigh's Ru-Mex-Oil, containing 26-1-2 per cent alcohol and vegetable matter in which rhubarb was indicated. Gooch's Mexican Syrup of Wild Cherry, Tar, etc., containing morphin

and alcohol, sugar, glycerin, methyl salicylate and benzaldehyde as flavor, and small amounts of tar and cherry (*Journal A. M. A.*, June 16, 1917, p. 1863).

**Flavored Epsom Salt.**—When a physician prescribes a dose of Epsom Salt to be taken in one of the official aromatic waters, he does not create a new invention. Yet the U. S. Patent Office has granted a patent for the "discovery" of a method for flavoring Epsom Salt (*Journal A. M. A.*, June 23, 1917, p. 1914).

**Russell Emulsion and Russell Prepared Green Bone.**—The Council on Pharmacy and Chemistry reports that "The Russell Emulsion" and "The Russell Prepared Green Bone," put out by the Standard Emulsion Company, are inadmissible to New and Non-official Remedies. The Russell Emulsion is said to be composed of beef-fat, coconut, peanut and cottonseed oils, held in suspension by albumin. The mixture is called a "physiological" emulsion and is exploited on the theory that lime starvation is a main factor in tuberculosis and that large amounts of fat are required for the lime starved. There is no proof that tuberculosis is due to an insufficiency of lime in the tissues, and the claims made for the emulsion are grossly unwarranted. Particular attention is called to the exploitation of the emulsion by one Dr. Hague who talks before medical societies. The Russell Prepared Green Bone is said to be made by digesting chicken bones with hydrochloric acid and pepsin and adding glycerin at the end of the digestion. This is advertised as a lime food. The greater value of a few glasses of milk daily is not mentioned (*Journal A. M. A.*, June 23, 1917, p. 1931).

**The Calcium Content of the Blood.**—It has been found that the calcium content of the blood plasma of cattle is remarkably constant, even when there is a continuous withdrawal as a result of pregnancy or lactation. It has also been found that there is no marked deviation from the normal in the calcium content of the blood serum of patients in the various stages of pulmonary tuberculosis. Even when a high milk diet was furnished over long periods, the calcium content of the blood was not increased above normal. Further, it was shown that the calcium content of the blood serum of normal human adults did not differ from that in sufferers from tuberculosis. Finally, it has been found that the calcium content of blood plasma differs little from the normal in advanced cases of uremia or in hemophilia or in purpura hemorrhagica (*Journal A. M. A.*, June 23, 1917, p. 1915).

**More Misbranded Nostrums.**—The following "patent medicines" have been found misbranded under the U. S. Food and Drugs Act, chiefly because the curative claims made for them were unwarranted and untrue: Sterline's Asthma and Hay Fever Remedy is a water-alcohol solution containing potassium and sodium iodids, bromids and acetates, as well as some laxative substance. Sterline's Bronchial Elixir, a solution of morphine, potassium citrate and aromatics in alcohol and water. Lung-Vita, consisted essentially of a petroleum oil, saponifiable oil and a solution containing sugar and glycerin, with a small quantity of benzoic acid. Arch Brand Nerve Tonic, a compound hypo-phosphite syrup. Arch Brand Blood Remedy, containing 18 per cent alcohol, sugar, potassium iodid, sarsaparilla and emodin-bearing drugs (*Journal A. M. A.*, June 23, 1917, p. 1932).

**Brom-I-Phos.**—The Council on Pharmacy and Chemistry reports that Brom-I-Phos (The National Drug Co.) is not eligible for admission to New and Non-official Remedies. The label declared the preparation to contain iodine, bromine and phosphorus in an aromatic base. The A. M. A. Chemical Laboratory found that Brom-I-Phos contained no free iodine, no free bromine and no elementary phosphorus; instead it appeared to be an alcoholic preparation containing iodid, bromid and a little phosphate. The Council rejected Brom-I-Phos because the statement of composition was unsatisfactory and misleading; because the therapeutic claims were exaggerated, and because the combination of bromine, iodine and phosphorus, or of bromid, iodid and phosphate is irrational (*Journal A. M. A.*, June 30, 1917, p. 2001).

## NEW BOOKS

### PHYSICAL EXERCISES FOR INVALIDS AND CONVALESCENTS.

By Edward H. Ochsner, B. S., M. D., F. A. C. S., President Illinois State Charities Commission; Attending Surgeon, Augustana Hospital. Illustrated, 54 pages, flexible linen cover. Price 75c. C. V. Mosby Company, St. Louis.

This is a very convenient little volume designed primarily to meet the needs of the author in the after care of his surgical and orthopedic cases. While the matter contained may be found in larger publications, the very compactness of the arrangement, its convenience to the patient, who should have it, rather than the physician, should make it popular with those needing such instruction.

### ROENTGEN TECHNIC (DIAGNOSTIC).

By Norman C. Prince, M. D., Attending Roentgenologist to the Omaha Free Dental Dispensary for Children; Associate Roentgenologist to the Douglas County Hospital, Bishop Clarkson Memorial Hospital; Swedish Immanuel Hospital; St. Joseph's Hospital and Ford Hospital, Omaha, Nebr. With 71 original illustrations, cloth, 140 pages. Price \$2.00. C. V. Mosby Company, St. Louis.



The author has designed this book to meet the needs of the physician who has installed X-ray apparatus in his office along with other diagnostic means. He points out some of the commoner errors in making exposures and plates. The work is nicely illustrated, with originals and contains many hints the heeding of which will render diagnosis in this field easier.

#### THE MAYO CLINIC, ROCHESTER, MINN.

**1916 Collected Papers of the Mayo Clinic, Rochester, Minn.** Octavo of 1014 pages, 411 illustrations. Philadelphia and London: W. B. Saunders Company, 1917. Cloth \$6.50 net; Half Morocco \$8.50 net.

This is one of the best contributions from the celebrated Mayo Clinic yet issued. The diversity of subjects treated make it a veritable gold mine to the student. The volume is made up of papers prepared by the Staff and read before various societies throughout the country. It goes without saying that they are beautifully illustrated and arranged with the greatest skill by Mrs. Mellish, the editor, who for several years has had charge of that phase of the work at Rochester.

Much attention has been given the problems and phenomena of the internal secretions, and the treatment of goiter and cancer in its various forms, of course, is given a very important place.

#### CLASSIFIED NOTICE

**E**STABLISHED PRACTICE FOR PRICE OF OFFICE EQUIPMENT. I have a well established practice in a live southern Oklahoma town and wish to specialize. I want some live doctor to take my place for the price of my office outfit. Will sell residence if desired. Address A. B. C., care Journal.

## Holmes Home of Redeeming Love

A quiet and secluded home  
For Fallen Girls

Located on an 80-acre tract of land. Two Modern Buildings. 74 Beds.  
Delivery and Operating Rooms equipped with  
all modern conveniences.

MISS ANNA WITTEMAN,

Superintendent.

W. W. WELLS, M. D.,

Chief Obstetrician.

54th Street and Hope, OKLAHOMA CITY, OKLA.

## WE BIND MEDICAL JOURNALS

Black or Tan Buckram  
Leather Labels

Boston, American and New York  
Medical Journals

13 issues to volume, \$1.35



208 Court St., Muskogee, Ok.

Oklahoma State Medical Journal  
Yearly volume, \$1.00

Prices on leather bindings  
furnished on request

## OFFICERS OF COUNTY SOCIETIES

County	President	Secretary
Adair .....	J. Patton, Stilwell	A. J. Sands, Watts
Alfalfa .....	S. B. Growden, Cherokee	L. T. Lancaster, Cherokee
Atoka .....		
Beaver .....		
Beckham .....	J. F. Yarbrough, Erick	K. R. Rone, Elk City
Blaine .....	M. W. Buchanan, Watonga	J. A. Norris, Okeene
Bryan .....	J. H. Shuler, Durant	D. Armstrong, Mead
Caddo .....	W. T. Hawn, Binger	C. R. Hume, Anadarko
Canadian .....	P. F. Herod, El Reno	W. J. Muzzy, El Reno
Choctaw .....	V. L. McPherson, Boswell	E. R. Askew, Hugo
Carter .....	J. C. Best, Ardmore	R. H. Henry, Ardmore
Cleveland .....	J. M. Williams, Norman	Gayfree Ellison, Norman
Cherokee .....	W. B. Blake, Tahlequah	C. A. Peterson, Tahlequah
Custer .....	M. C. Comer, Clinton	S. C. Davis, Clinton
Comanche .....	L. A. Milne, Lawton	G. Pinnell, Lawton
Coal .....	J. B. Clark, Coalgate	A. Cates, Tupelo
Cotton .....	M. T. Clark, Walters	G. O. Webb, Temple
Craig .....	C. S. Neer, Vinita	W. R. Marks, Vinita
Creek .....	C. D. Blachley, Drumright	H. S. Garland, Sapulpa
Dewey .....		
Ellis .....		
Garfield .....	W. L. Kendall, Enid	James H. Hays, Enid
Garvin .....	G. L. Johnson, Pauls Valley	N. H. Lindsey, Pauls Valley
Grady .....	E. L. Dawson, Chickasha	Martha Bledsoe, Chickasha
Grant .....		C. H. Lockwood, Medford
Greer .....	E. M. Poer, Mangum	T. J. Horsley, Mangum
Harmon .....		J. B. Hollis, Hollis
Haskell .....	M. VanMatre, Keota	J. R. Waltrip, Kinta
Hughes .....		
Jackson .....	D. C. Buck, Eldorado	W. H. Rutland, Altus
Jefferson .....	G. C. Wilton, Ryan	J. I. Derr, Waurika
Johnson .....	C. B. Ballard, Mannsville	H. B. Kniseley, Tishomingo
Kay .....		A. S. Risser, Blackwell
Kingfisher .....	C. E. Wagoner, Hennessey	Chas. W. Fisk, Kingfisher
Kiowa .....	Wm. McIlwain, Lonewolf	A. L. Wagoner, Hobart
Latimer .....		E. B. Hamilton, Wilburton
Le Flore .....	J. B. Beckett, Spiro	G. A. Morrison, Poteau
Lincoln .....		A. M. Marshall, Chandler
Logan .....	A. A. West, Guthrie	E. O. Barker, Guthrie
Love .....		
Mayes .....	J. E. Hollingsworth, Strang	W. C. Bryant, Choteau
Major .....		
Marshall .....	A. E. Ballard, Madill	O. E. Wellborn, Kingston
McClain .....	J. W. West, Purcell	O. O. Dawson, Wayne
McCurtain .....	A. S. Graydon, Idabel	C. R. McDonald, Broken Bow
McIntosh .....	N. P. Lee, Checotah	Wm. A. Tolleson, Eufaula
Murray .....	J. A. Adams, Sulphur	W. H. Powell, Sulphur
Muskogee .....	I. B. Oldham, Muskogee	J. G. Noble, Muskogee
Noble .....	Bruce Watson, Perry	T. F. Renfrow, Billings
Nowata .....	J. E. Brookshire, Nowata	J. R. Collins, Nowata
Okfuskee .....	H. A. May, Okemah	J. M. Pemberton, Paden
Oklahoma .....	L. J. Moorman, Oklahoma City	F. B. Sorgatz, Oklahoma City
Okmulgee .....	N. N. Simpson, Henryetta	H. E. Brees, Henryetta
Ottawa .....	R. F. Von Cannon, Miami	G. P. McNaughton, Miami
Osage .....	J. M. Ennis, Pawhuska	Benj. Skinner, Pawhuska
Pawnee .....		E. T. Robinson, Pawnee
Payne .....	E. M. Harris, Cushing	J. B. Murphy, Stillwater
Pittsburg .....	J. O. Grubbs, McAlester	J. C. Johnston, McAlester
Pottawatomie .....	J. H. Scott, Shawnee	G. S. Baxter, Shawnee
Pontotoc .....	C. L. Orr, Ada	M. L. Lewis, Ada
Pushmataha .....		
Rogers .....	W. E. Smith, Collinsville	W. A. Howard, Chelsea
Roger Mills .....	W. S. Wimberly, Hammon	Lee Dorrab, Hammon
Seminole .....		W. L. Knight, Wewoka
Sequoyah .....	S. B. Jones, Sallisaw	T. F. Wood, Sallisaw
Stephens .....	E. B. Thomason, Velma	J. M. Nieweg, Duncan
Texas .....	W. H. Langston, Guymon	R. B. Hays, Guymon
Tulsa .....	A. W. Roth, Tulsa	W. Forest Dutton, Tulsa
Tillman .....	A. J. Hays, Frederick	J. E. Arrington, Frederick
Wagoner .....	F. W. Smith, Wagoner	S. R. Bates, Wagoner
Washita .....	D. W. Bennett, Sentinel	A. S. Neal, Cordell
Washington .....	W. E. Rammel, Bartlesville	J. G. Smith, Bartlesville
Woodward .....	Ralph Workman, Woodward	C. W. Tedrowe, Woodward
Woods .....	Isaac Hunt, Freedom	D. B. Ensor, Hopeton

## OFFICERS OF OKLAHOMA STATE MEDICAL ASSOCIATION.

Meeting Place—Tulsa, May, 1918.

President, 1917-18—Dr. W. Albert Cook, Tulsa.

President-elect, 1918-19—Dr. L. S. Willour, McAlester.

1st Vice-President—Dr. McLain Rogers, Clinton.

2nd Vice-President—Dr. G. F. Border, Mangum.

3rd Vice-President—Dr. Horace Reed, Oklahoma City.

Secretary-Treasurer-Editor—Dr. C. A. Thompson, Muskogee.

Delegate to the A. M. A., 1918-19—Dr. Chas. R. Hume, Anadarko.

Delegate to the A. M. A. 1917-18—Dr. M. A. Kelso, Enid.

## COUNCILOR DISTRICTS.

1. Cimarron, Texas, Beaver, Harper, Ellis, Woods and Woodward; Councilor, Dr. J. M. Workman, Woodward. Term expires 1919.

2. Roger Mills, Beckham, Dewey, Custer, Washita and Blaine; Councilor, Dr. Ellis Lamb, Clinton. Term expires 1920.

3. Harmon, Greer, Jackson, Kiowa, Tillman, Comanche and Cotton; Councilor, Dr. G. P. Cherry, Mangum. Term expires 1918.

4. Major, Alfalfa, Grant, Garfield, Noble and Kay; Councilor, Dr. G. A. Boyle, Enid. Term expires 1919.

5. Kingfisher, Canadian, Oklahoma and Logan; Councilor, Dr. Fred Y. Cronk, Guthrie. Term expires 1918.

6. Caddo, Grady, McClain, Garvin, Stephens and Jefferson; Councilor, Dr. C. M. Maupin, Waurika. Term expires 1919.

7. Osage, Pawnee, Creek, Okfuskee, Okmulgee and Tulsa; Councilor, Dr. N. W. Mayginnnes, Tulsa. Term expires 1920.

8. Payne, Lincoln, Cleveland, Pottawatomie and Seminole; Councilor, Dr. H. M. Williams, Wellston. Term expires 1920.

9. Pontotoc, Murray, Carter, Love, Marshall, Johnston and Coal; Councilor, Dr. J. T. Slover, Sulphur. Term expires 1918.

10. Washington, Nowata, Rogers, Craig, Ottawa, Mayes and Delaware; Councilor, Dr. R. L. Mitchell, Vinita. Term expires 1918.

11. Wagoner, Muskogee, McIntosh, Haskell, Cherokee and Adair; Councilor, Dr. P. P. Nesbitt, Muskogee. Term expires 1920.

12. Hughes, Pittsburg, Latimer, LeFlore and Sequoyah; Councilor, Dr. Ed. D. James, Haileyville. Term expires 1920.

13. Atoka, Pushmataha, Bryan, Choctaw and McCurtain; Councilor, Dr. J. L. Austin, Durant. Term expires 1920.

## CHAIRMEN OF SCIENTIFIC SECTIONS.

Surgery and Gynecology—Dr. LeRoy Long, Oklahoma City.

Pediatrics and Obstetrics—Dr. T. C. Sanders, Shawnee.

Eye, Ear, Nose and Throat—Dr. L. A. Newton, Oklahoma City.

General Medicine, Nervous and Mental Diseases—Dr. A. B. Leeds, Chickasha.

Genitourinary, Skin and Radiology—Dr. W. J. Wallace, Oklahoma City.

Legislative Committee—Dr. Millington Smith, Oklahoma City; Dr. J. M. Byrum, Shawnee; Dr. W. T. Salmon, Oklahoma City.

For the Study and Control of Cancer—Drs. LeRoy Long, Oklahoma City; Gayfree Ellison, Norman; D. A. Myers, Lawton.

For the Study and Control of Pellagra—Drs. A. A. Thurlow, Norman; L. A. Mitchell, Frederick; J. C. Watkins, Checotah.

For the Study of Venereal Diseases—Drs. Wm. J. Wallace, Oklahoma City; Ross Grosshart, Tulsa; J. E. Bercau, Okmulgee.

Necrology—Drs. Martha Bledsod, Chickasha; J. W. Pollard, Bartlesville.

Tuberculosis—Drs. L. J. Moorman, Oklahoma City; C. W. Heitzman, Muskogee; Leila E. Andrews, Oklahoma City.

Conservation of Vision—Drs. L. A. Newton, Oklahoma City; L. Haynes Buxton, Oklahoma City; G. E. Hartshorne, Shawnee.

First Aid Committee—Drs. G. S. Baxter, Shawnee; Jas. C. Johnston, McAlester.

Committee on Medical Education—Drs. A. L. Blesh; A. K. West; A. W. White, Oklahoma City.

State Commissioner of Health—Dr. John W. Duke, Guthrie, Oklahoma.

## STATE BOARD OF MEDICAL EXAMINERS.

J. J. Williams, President, Weatherford; R. V. Smith, Secretary, Tulsa; M. Gray, Vice-Pres., Mountain View; O. R. Gregg, Treas., Freedom; W. T. Ray, Gould; H. C. Montague, Muskogee.

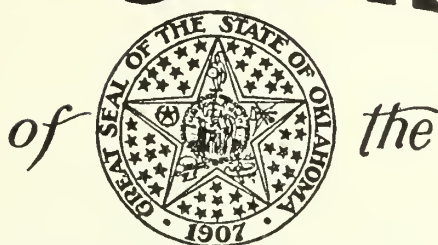
Reciprocity with Georgia, Kentucky, Mississippi, Nevada, North Carolina, Wisconsin, Kansas, Arkansas, Virginia, West Virginia, Nebraska, New Mexico, Tennessee, Iowa, Ohio, California, Colorado, Indiana, Missouri, New Jersey, Vermont, Texas, Michigan.

Meetings held second Tuesday of January, April, July and October, Oklahoma City.

Address all communications to the Secretary, Dr. R. V. Smith, Daniel bldg., Tulsa.



# THE JOURNAL



## Oklahoma State Medical Association

VOLUME X

MUSKOGEE, OKLA., SEPTEMBER, 1917

NUMBER 9

### THE SURGERY OF CYSTOCELE, RECTOCELE AND PROCIDENTIA UTERI.\*

A. L. BLESCH, M. D., F. A. C. S., Oklahoma City, Oklahoma.

Surgeon in Chief and Chief of Staff Wesley Hospital, Associate Professor of Surgery and  
Professor of Clinical Surgery, State University Medical School.

Obviously in dealing with the problem of procidentia uteri, advice which is perfectly proper for the woman who is past the child-bearing period might be pernicious for the woman during the fruitful period of life. In the former case, our conclusions and the advice based thereon will have to do only with recommending that procedure which promises the patient herself the best results with the least risk. In the latter we must ever keep in mind the conservation of the maternal function as well.

We have all seen young and middle aged women with procidentia uteri completa bear children without hindrance, indeed many of them experiencing entire relief from the suffering incident to that condition only when through pregnancy the uterus had become so large that by virtue of its size it remained high in the abdomen. These are the cases which present surgical problems exceedingly complex and difficult of solution. The problem is greatly simplified with the passing of maternity.

Naturally then the subject falls into two broad classes: 1. The parous woman.  
2. The non-parous woman.

It is evident too that there is a congenital type of retroversion and decensus uteri probably developmental in that there is a muscular deficiency in the posterior uterine wall associated with or without an anterior cervical displacement.

Also a low uterus which is but a part of, and associated with a general visceroptosis, comes in for consideration, especially since it is often the vicarious victim upon which is expended the operative impact, while it is responsible for little, if any, of the symptomatic syndrome.

The uterus, like the abdominal organs, is more apt to raise a cry of protestation in the *early* stages of a descensus than in the later. The reason for this lies in the fact that the out-cry is due to *ligamentous stretching*. The function of the so-called uterine ligaments is that of guy ropes only and they are not meant to sustain the weight of the organ at all. When called upon to do so they protest. After a certain degree of attenuation they give up the fight, so to say. Very little, if any, of the protest is due to crowding of the rectum behind, or the bladder in front.

\*Read before the Section on Surgery, Medicine Park, May 9, 1917.

Yet the bladder and rectum *do* suffer from the mal-position but in quite another way. This will be considered later.

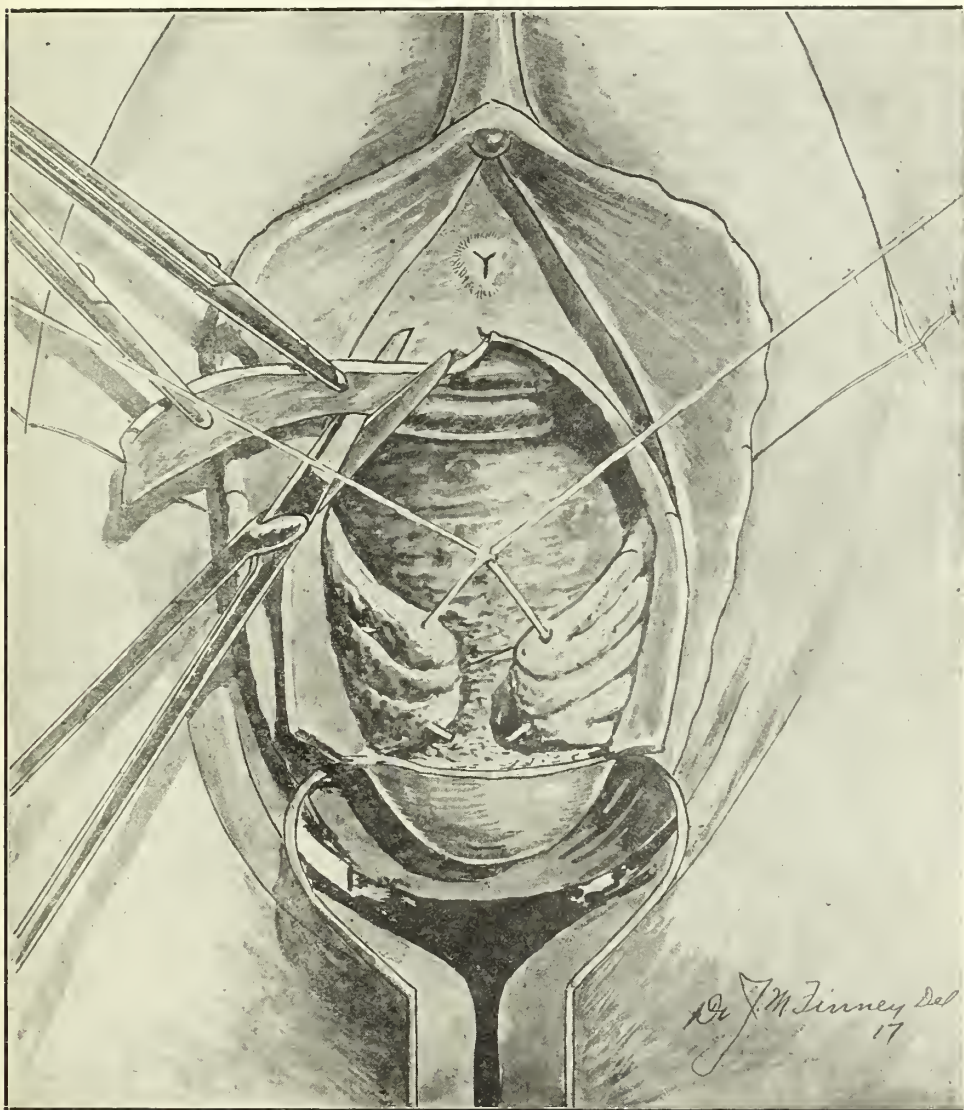
That the *beginning* of these ptotic difficulties oftener give rise to actual suffering than the advanced stages can be easily understood. Take the stomach as an example. Here the pyloric and duodenal attachments, being the firmest, are the last to let go. The result is mechanical difficulty in emptying—stasis. Just as soon as the pylorus comes down, emptying becomes easier and the patient experiences a degree of relief. The same thing happens when the colon lets go at its flexural attachments. With the uterus, conditions are somewhat different in that the organ itself manifests just as with the above organs; after the first out-cry, due to a ligament pull, as it descends lower, other organs, the bladder and rectum, become involved; the formation of rectocele and cystocele occurs. Now there is a stasis of bladder and rectum and these tell a tale of their own.

Cystocele and rectocele are not associated with *all* low positions of the uterus even in marked degrees of descensus. Why? The writer has never seen it occur in the virginal type of descensus. It is usually the associated factor of the acquired type, that is the descensus associated with lacerations of the outlet. Herein lies the source of failure in trying to fit *one* type or plan of operation to cover *all* low positions of the uterus. In practically all forms of descensus the condition has been attacked through some type of operation on the round ligament associated *where required* with perineal and anterior vaginal wall plastic. Now the writer contends that just in these cases alone is furnished the field for the round ligament operation of whatever type, and the type makes little difference so long as it does not implicate other organs. But in the congenital or virginal type there is descensus because congenitally there is a *forward displacement* of the cervix. This displacement forward of the cervix brings the long axis of the uterus into coincidence with the long axis of the vagina. Intra-abdominal pressure, always acting, now instead of falling on the posterior surface of a normally anteverted uterus, falls direct on the fundus, driving the wedge-shaped organ like a wedge into the vagina and the burden of resisting this downward move is opposed alone by the ligamentous structures, especially the round ligaments. They cannot maintain the persistent, continuous, unequal struggle, no muscles anywhere were ever designed to do it. All muscular and ligamentous tissues everywhere in the body in order to work must rest. If the relatively ante-position of this cervix is not changed, the unequal struggle will only be begun over again by shortening the round ligaments by any method so-ever. Are we not seeing this happen day after day?

Much of the same process occurs in the acquired forms, that is, those due to lacerations. Here a normally positioned cervix is dragged downward by the descent of an unsupported bowel (rectocele) until the fundus tilts backward and throws the long axis of the organ in coincidence with that of the vagina when it is aided and abetted by intra-abdominal pressure. With a proper reconstruction of the pelvic floor by restoration of levator ani and its fascia, bowel is thrust back, the rectocele obliterated, and the cervix carried back. *Now* any round ligament operation that does not harm will answer. Any operation devised for descensus uteri that does not take into consideration the relief of cystocele and rectocele where such exists will neither cure the procidentia nor relieve the patient for the reason that primarily the suffering is not so much due to the mal-position of the uterus in this stage of the trouble and in this type of descensus as it is to sagging rectum and bladder. Many of these women can satisfactorily empty neither bladder or rectum without the aid of the supporting finger. The bladder usually contains a residual urine and gives the clinical as well as the cystoscope picture of the male bladder of the prostatic. The writer has elsewhere\* demonstrated what he considers the correct principles and developed the technique of the rectocele and cystocele operation and will not therefore burden this paper with the details any further than to introduce the drawings illustrating them.

\*See "Mechanics of Perineal Restoration and Cystocele," Journal of Southwest Medical Association, vol. 23, page 57.

The operation best suited to vaginal prolapsus when it is necessary to deal surgically with this condition at all must have in view the retraction of the cervix backward toward the hollow of the sacrum. Some surgeons have endeavored to do this by associating shortening of the so-called utero-sacral ligaments with some form of round ligament operation. In my hands this has not been successful,



Shows Method of Insertion of Mattress Suture in Authors Modification, Doubling Ligament Upon Itself and also Anchoring It to the Cervix.

probably because as weight bearers these mostly peritoneal structures enclosing a few attenuated muscle and connective tissue strands are entirely inadequate to the burden thrust upon them. Just as sure as the cervix comes forward again, just that sure is it merely a question of time until the uterus will be down again.



In the writer's experience there are but two ways to dependably hold such a uterus high:

\*1. Preferably in the parous woman by either the E. C. Dudley operation on the lower margin of the broad ligaments or some modification of it, combined with the round ligament operation, which I will describe below, or

2. Fix the uterus in the abdominal wall which is not to be thought of except as a last resort in the parous woman, and only then after sterilization.

But one of the most difficult diagnostic points to definitely settle in this class of cases is just how much of the syndrome is due to the mal-posed uterus, and hence, how much relief can be promised the patient by even the best planned and executed operation. Many, very many of these cases are no better following an anatomically perfectly posed uterus. At the same time there can be no question that the suffering from this condition in some of these cases is intolerable, and due to the uterus itself or the ligamentous tug. The writer has resorted to the diagnostic device of inserting a Hodge pessary in order to demonstrate the degree of relief to be obtained by taking away the ligamentous strain, with the greatest satisfaction. Those cases relieved by the pessary will be permanently relieved by proper operative procedure, those not relieved will not be benefited.

The operation most successful in the writer's hands consists in shortening the cervical attachment of the broad ligament *in front* of the cervix after the manner of the Dudley procedure combined with what the writer describes as the inguinal canal round ligament operation. The operation on the broad ligament (see illustration) differs from Dudley's only in that he severs the connection of this portion of the ligament from the sides of the cervix and unites them in front of it, thus throwing the cervix back toward the hollow of the sacrum by the grasp of this powerful structure, while the writer merely picks up a bight of it in the needle on the one side, and in passing across to do the same thing on the opposite side, takes also a bight in the center of the anterior surface of the cervix. When this suture is tied it accomplishes exactly the same thing Dudley is after and we are not annoyed by the troublesome hemorrhage arising from the severed very vascular side structures. Opening the anterior cul-de-sac of the vagina, not however going through the peritoneum, admits one direct to the structures dealt with in the operation and the whole procedure need not require more than ten minutes. The round ligament operation (the writer does not know whose it is) is performed in the following manner (see illustrations); median lower coleotomy curved forcep is thrust through the inguinal canal *above* the rectus fascia. After emerging into the abdomen through the canal the forceps readily follows beneath the serous covering of the round ligament. This is now nicked at the desired point, the ligament grasped and withdrawn with the forceps to the surface of the fascia where it is sutured. This combination makes an anatomically ideal operation.

The writer's objection to the so-called Baldy-Webster hammock operation, after having used it in several hundred cases, is that it predisposes to ovarian degeneration and adhesions by interfering with the ovarian circulation. This has been uncomfortably demonstrated to him by "return engagements."

But it is to be remembered that anatomical restoration does not always insure functional relief. Suffering, in other words symptomatology, is purely a personal equation and is sometimes often a surreptitious call for sympathy. In making promises of surgical relief this fact is not to be forgotten. Operate upon the wife if need be, but do not fail to advise the husband, and your surgical results will surely be improved. So far we have been considering only the procedures designed for the parous woman. Now and then, fortunately rarely, none of the procedures mentioned, or any other short of absolute fixation will give relief. Especially is this true in some cases of procidentia uteri completa. Here the temptation is

---

\*Limited space prohibits inclusion of many cuts illustrative of this article, which were used by the author to demonstrate his views.

often strong to do a hysterectomy, under the mistaken idea that the uterus itself is the principal factor in the suffering. Not only is this not true, but if the uterus is removed the only means of overcoming the real factors causing the suffering, the cystocele and rectocele, is destroyed. This phase of the question will be considered more fully in that part of this paper dealing with the non-parous woman. Suffice to say here that in such cases abdominal fascial fixation (see illustrations) preceded by sterilization after the author's method\* has proved satisfactory.

The *Wertheim-Watkins* interpositioning has no advantage in this class of cases over the operation mentioned and must also be preceded by sterilization.

**The Non-Parous.** The problem of the woman past the menopause with procidentia uteri completa, has been the source of no little trouble and annoyance to the author. At first hysterectomy with perineal repair and anterior vaginal wall plastic was practiced. All of them have enormous cystocele and rectocele. Indeed these are the cause of the most of their suffering. The uterus is eroded from exposure and friction, but shows a surprisingly small degree of soreness upon manipulation.

It is the ignoring of the fact that the cystocele and rectocele is the surgical object, or at least the magnifying of the relationship of the uterus thereto, that leads the advocate of hysterectomy for this condition into error. The writer found in the hysterectomized subjects that cystocele and rectocele would return again and again after operation and that he had removed in the uterus the sole hope of permanent relief. In these cases, both the anterior and posterior vaginal walls, the whole vagina is very much elongated by the exaggerated drag of the uterus which is worn outside the body between the thighs, and the cervix is also elongated, hypertrophied and eroded. A satisfactory emptying of either bladder or rectum is impossible without artificial mechanical aid. A torturing cystitis adds to the sufferer's misery. Removing the uterus, the least offender, even though combined with outlet plasties, has proven in my hands but a makeshift. But the uterus can be used to permanently hang these sagging structures as high as we choose in the strong unyielding fascia of the abdominal wall. This done and all strain from above removed, vaginal wall plasties will hold. Before this is done, however, many of these elongated, eroded, hypertrophied cervixes should be amputated for the dual purpose of getting rid of a fertile cancer field and also a dangling annoyance upon which the patient may focus a neurasthenic mind.

The illustration shows the author's method of doing this operation.

If we find that with the uterus and elongated vagina fixing the uterus in the abdominal wall does not take up enough of the slack, a supra-vaginal amputation may be done (see illustration) and the serosa covered cervical stump may be anchored in the fascia in the same manner as the fundus.

For the plastic work on the vagina, the reader is referred to the article on the "Mechanics of Perineal Restoration and Cystocele" mentioned above, the illustration of which is inserted here is borrowed from that article.

### PERICARDIUM.

A comparison of the compression and Roentgen-ray findings after injection of the pericardium, made after experimental work with fresh human cadavers, is reported by R. S. Morris and Ellis R. Bader, Cincinnati (*Journal A. M. A.*, Aug. 11, 1917). Experiments and methods are described with special reference largely to the question of presence or absence of an obtuse cardiohepatic angle. The findings are summed up in the following: "Our findings in fresh cadavers show that retrosternal dullness, with increasing retrosternal shadow in roentgenograms, is a relatively early phenomenon after injection of the pericardium with serous fluid, and suggest that shifting retrosternal dullness (loss or marked decrease in dullness, with decrease in the shadow in the fluoroscope or in plate) may be a relatively early sign of pericardial effusion. With fluid under great pressure in the pericardium on the other hand, marked shifting dullness will probably largely disappear." The article is illustrated.

\*Journal of the Southwest Medical Association, vol. 23, page 57.

## THE USE AND ABUSE OF THE SERUMS AND VACCINES.\*

CHAS. W. FISK, M. D., Kingfisher, Oklahoma.

The discovery that infectious diseases are caused by living micro-organisms marks the beginning of a new era in medicine. From the very beginning we were confident that we would be able to discard the empiricism of the past and apply our remedial measures with an unerring certainty. While we have been able to achieve a notable degree of success, we are far from the goal of our expectations.

Many things which appealed to us as rational have long since been discarded and almost forgotten. When some of us commenced the study of our profession the surgeons were operating with a carbolic acid spray protecting the field of operation from the germs which were swarming in the air. Sterilization of instruments and dressings and of the field of operation, the technique of the modern surgeon, have been developed slowly and only after painstaking care and careful research.

The first specific treatment which gained a permanent hold upon the profession was the antitoxin treatment of diphtheria. This has been followed by others which have been found to exhibit more or less distinctive prophylactic and therapeutic value. Specific anti-sera have been prepared for tetanus, cerebro-spinal meningitis, pneumonia, dysentery, anterior poliomyelitis, and other diseases of bacterial origin. There are variant strains of bacteria, each of which arouses its specific reaction. Favorable results can be expected only in those cases where the serum is obtained from an animal which has reacted to the proper strain. The serum treatment is a specific treatment.

Recent investigations in the treatment of pneumonia and some other infections appear to have demonstrated that the serum to be effective must correspond with the type of infection. Since the pneumococcus is now known to have four distinct types, with the probability that the list will be extended, it is self-evident that only by a lucky chance could any benefit be derived from the use of a stock serum.

We have been disappointed that this treatment which promised so much has not come up to our expectations. Perhaps we expected too much. We are dealing with vital forces that are not well understood. They are so complicated that they may forever elude our grasp.

Since Wright published reports of his experiments with autogenous vaccines in the treatment of chronic infectious diseases, we have been carried away with this theory. It was introduced as a specific treatment requiring an accurate knowledge of the nature of the infection and careful observation of the reactions produced. Physicians are not all equipped to determine the type of infection. This trifling inconvenience has been overcome by using the so-called mixed bacterins. In a field of experimentation which should call for special care and careful judgment we have allowed our zeal to far outrun our discretion.

The prophylactic application of the bacterial vaccines has in a few cases been successful. Certain types of infection produce no immunity but rather an increased susceptibility. A disease which has a definite clinical course is not necessarily always due to the same specific type of infection. As before stated, four distinct types of the pneumococcus are now differentiated. The common cold may be caused by the influenza bacillus, but it is just as likely to be something else. The streptococcus has been found to be the offender in recent epidemics. The use of a vaccine for the purpose of conferring immunity to diseases of such a protean nature does not promise success. The use of a mixed vaccine for such a purpose is unscientific and indefensible.

The difficulties that confront us in the adaptation of a specific bacterin for the treatment of disease are almost insurmountable. It has long been known that

---

\*Read at the meeting of the State Medical Association, Medicine Park, May 9, 1917.



bacteria may be made to lose their characteristic arrangement and other distinguishing properties by cultural methods. Now it is thoroughly demonstrated that by serial passage germs may develop a selective affinity for various organs and tissues, and also a distinctive virulence. Bacteria of various kinds may develop such an affinity for the same organs or tissues. An arthritis is not necessarily due to a specific coccus, but may be caused by any infectious agent which has developed a preference for the synovial membranes.

At present we are centering our attention upon the focal infections and the harmful results caused by them. The bacteria in these foci of infection are capable of transmutation both in their selective affinity and virulence. In making use of a bacterin for the treatment of disease, it is necessary to make it conform to the special strain of the infection if this is to be accepted as a specific treatment. Autogenous vaccines can only to a limited extent meet this requirement. A complement fixation test may be required to determine the real nature of the infecting agent.

It is hardly to be expected that a disease like pneumonia, which usually runs a short course, can be successfully treated by this method. There is not time to build up the defensive reaction. If we use the intravenous treatment, it causes a severe chill and violent fever reaction which can hardly be free from danger in a disease of this nature. Rosenow warns against the indiscriminate use of this treatment "until the nature and degree of the reaction is better understood and can be better controlled."

Gonorrhoeal infection has in some cases been remarkably benefited by the specific bacterin. But this is not a specific reaction. As much benefit may be derived from the use of the meningococcus or colon-bacillus bacterin or even from the use of some non-bacterial protein. The intra-muscular injection of milk will cause a like fever reaction and when this reaction is pronounced we are informed that the benefits are just as great. It is pretty well demonstrated that the rise of temperature is the only part of the process that is of any real therapeutic value. Infection by the gonococcus may be benefited by the pyrexia of typhoid fever or pneumonia. Some careful investigators are of the opinion that the gonococcal bacterin has no specific therapeutic or prophylactic value.

We have been somewhat favorably impressed with the use of the bacterin treatment in typhoid fever. Whatever else may be said of the treatment, it is not specific. The same reaction may be secured and like benefits derived from the use of the colon bacillus or the bacillus pyocyaneus.

It is very doubtful whether any bacterin has any specific therapeutic value. It is possible that whatever benefit may be derived from this method of treatment is the result of a reaction to the protein-content of the bacterial vaccine. If this is found to be true, there can be no justification for administering the mixed bacterins. The harmful effects of this treatment are too lightly considered. There is at times a prolonging of the negative phase with a reduced resistance to infection. It would be worth while to note whether pneumonia treated by this method is more often followed by pyothorax, endocarditis or a chronic infection of some other organ.

Dr. S. G. Bonney states that "we cannot consistently subject an invalid presenting every reasonable assurance of eventual recovery, to the active influence of a therapeutic agent of uncertain value." In his summary of the use of the bacterial vaccine in the treatment of tuberculosis he says: "Notwithstanding the picturesque examples of remarkable improvement, which though impressive are infrequently observed, the fact remains that my own clinical experience suggests for vaccine therapy but a limited field of usefulness."

Dr. Edward L. Keys, Jr., gives this testimony. "I have been guilty of expressing in print great confidence in various kinds of serums and vaccines. At present I do not feel any confidence in vaccines or serums."

The truly great achievement of our day has been not so much the improvements in treating disease as in its prevention. We are able to treat diphtheria more successfully than we did thirty years ago. The more important fact remains that we have not so many cases to treat. It has been a long step from the days when diphtheria, typhoid fever and dysentery were epidemic diseases. The achievements of the present are only a promise of the future possibilities of prophylaxis.

The history of the past shows that pestilence has been the handmaid of war. Typhus fever raged in Serbia and in the Russian army in the winter of 1914. It seems now to be very effectively controlled. Cholera and bubonic plague have not yet swept these war stricken countries. If the sanitary experts of the warring nations are able to hold in check these deadly diseases in a community whose powers of resistance are reduced, we know not to what limit, by insufficient nourishment, they will command the respect of the whole world.

The bacterin therapy cannot maintain its hold upon the profession in its present form. It is not logical or reasonable to inject a heterogeneous mixture of the product of disease germs into the patient who is already overpowered by infection. The too prevalent practice of blindly following this treatment will not be to the credit of the profession. If in the final analysis it is found that certain infections are uniformly benefited when a proper bacterin is used, it may become necessary to first obtain a correct diagnosis by the use of the microscope and in some cases by the complement fixation method.

We need not be surprised to see the whole system fall to pieces and an entirely new series of therapeutic agents be elaborated, being proteins of bacterial or non-bacterial origin which will be found to exert a uniform action in increasing the resistance to infection and be the decisive factor in the cure of diseases of infectious origin.

#### Discussion.

**Dr. C. J. Fishman, Oklahoma City:** There are a few points that I think ought to be gone over in the discussion of these focal infection ideas. First, let us speak in general about the etiology of disease. We all remember how frequently in the study of etiology during our student days, mention was made of such indefinite causes as cold, exposure, wetting of the feet, etc. We must remember that in the etiology of syphilis there were not less than 144 generally accepted etiological factors from the time the disease was first studied until the time that Hoffman and Schaudinn announced and proved the *treponema pallida* as the true cause, —144 different causes that were generally accepted from time to time by students of the disease as being the true cause of syphilis. In our ramblings for etiological factors of disease, we have gone from step to step until now we find that in a number of cases at least, organisms are the cause.

Probably the next important discovery in etiology, was the finding of bacteria in the blood stream of certain infectious diseases that were previously accepted as being local pathological conditions, e. g. typhoid septicemia in ilioocolitis, pneumonic septicemia in lung pneumonia and so on in various diseases we can mention. Appendicitis is often primarily a septicemia and it so frequently follows a throat infection. It is well known that during the winter when we have an epidemic of colds and sore throat, there would follow an epidemic of appendix cases into the hospital with a history of a nose or throat infection about ten days previous to the onset of the appendicitis. The next logical point to answer is, how do the organisms enter the general system? They certainly get in from some point within the body, from some disease focus, and then we may speak of the process as one of focal infection.

There is danger in the focal infection idea of disease and that danger is, to attribute too many diseases as being distinctly caused by foci of infection and to expect too prompt and too complete relief by the removal of infectious foci. We are to remember that individuals may have infectious foci and other general diseases at the same time which are not related to one another. Furthermore, if

there is a relation, that relation may be due to secondary foci and not to the evident primary focus. To give a pathological example, we know that neuritis is frequently caused by infected tonsils, but removal of the tonsils does not always cure the neuritis. The nerve irritation may be kept up by infection in distal glands or by toxins of the intestines or other parts of the body that were induced by the tonsillar infection and are no longer bacterial in origin. To take a crude example, in our present war, these conditions may be likened to the spy system. There were in our country a few weeks ago, a number of explosions in the munition plants, etc. It was suspected that certain foreign officials had something to do with that condition. These officials were removed, but the explosions did not promptly stop. There were evidently secondary spies who had learned to produce outbreaks and these likewise had to be discovered and gotten rid of. So there are bacterial spies on our systems at times.

Dr. Fisk needs make no apologies for his conservatism. That is just what we need in the study of focal infections. We must seek to discover the middle road in diseases that are apparently due to focal infections, and to know whether or not we are doing too much meddling and giving too much hope. We should not be too sure of prognosis.

Another important point to determine is, what causes organisms localized in some part of the body to break out and invade distant parts? We do not know whether it is exposure to cold, getting wet feet or nervous factors. We do not know the factors that result in a cure, either by lysis or crisis, for example, in pneumonia. We know from observation of hospital cases that a large percentage of the crises appear in the first 24 to 36 hours. What it is due to, we can only guess. Is it the handling of the patient in removal to the hospital? Is it due to nothing more than the bath while there? Is it due to the fresh air that they get? Or, it may be all of these factors.

So in closing, we must recall that we are still on a road that is not straight, in the conception of focal infections. Some of us are too conservative and do not feel that we have the right to consider that focal infections cause any but a very few of distinctly demonstrable general diseases. Others are too radical and feel as though they have in the focal infection idea found a panacea for the etiology and treatment of nearly all diseases. Such men will sacrifice innocent teeth and tonsils and offer hopeful prognoses upon an unstable basis. There will be a time some day when we are on the right road but that time will come only after careful observation and handling of our cases.

---

### MYOCARDIAL INVOLVEMENT.

B. S. Oppenheimer and M. A. Rothschild, New York (*Journal A. M. A.*, Aug. 11, 1917), have studied the relationship of myocardial involvement to a certain type of electrocardiogram. *A priori* considerations lead them to believe that there is an electrocardiogram characteristic of lesions involving part of a bundle branch or its arborizations. They prefer the term intraventricular block to that of bundle block in describing these conditions. In the course of the past few years there have been observed sixty-two cases in which the electrocardiogram indicated an intraventricular block, and they have studied and analyzed these cases noticing also its association to atrioventricular block, and describing the pathologic changes found on necropsy in fourteen cases. Their conclusions are as follows: "1. There has been a discrepancy between previous electrocardiographic interpretation and pathologic findings. 2. Theoretical considerations and pathologic findings point to the existence of a hitherto undescribed type of disturbance which we have called arborization block. 3. We venture to state, therefore, that there is a definite clinical combination to be known as arborization block; that this condition can be diagnosed by the presence of a definite and permanent type of electrocardiogram, and that the condition has a very serious prognosis."



**FOCAL INFECTIONS AND THEIR DISTAL CONSEQUENCES.\*****ELLIS LAMB, M. D., Clinton, Oklahoma.**

Closely following the opsonic theory we had the close relationship of articular and other forms of rheumatism and infected tonsils, and in fact the finding of the same infective micro-organism in the infected joints and the tonsils as pointed out by the late John B. Murphy and Billings, and the extensive removal of diseased tonsils for the cure of rheumatism, that it paved the way for a more extensive study of focal infection, and today we are beginning to realize how very extensively such a multitude of systemic diseases arise from focal infection in some parts of the body, and just where we may land in such study the future only can tell.

Focal infection is a circumscribed area of pyogenic infected tissue, usually in some fossae, crypt, sinus, cavity, or even behind a fold of mucous membrane or integument and as a rule apparently inactive at point of infection which only seems to act as a mere breeding place, and depot of supply, with but little tendencies to destructiveness to tissues at site of infection, but often very active when transmitted through the blood stream or lymph to remote parts of the body. When finding selective tissue, with proper environment, and probably forming a mixed infection, by meeting in such selective tissue, with other forms of infection, possibly from some other foci.

Primary foci are usually to be found in the mouth and throat, as well as nasal chambers and naso-pharynx and accessory sinuses; from these particularly do we usually have the most virulent forms of infection, such as the different strains of the streptococci, viz: the streptococcus viridans, streptococcus albus, streptococcus auris, also pneumococci, diplococci, influenza bacilli, diphtheria bacilli, and even occasionally meningococcus, intra-cellularis and others. Other sites of foci are middle ear, intestinal tract or rectum, uterus, fallopian tubes, prostate gland, seminal vesicle, urethral stricture, etc., or at any point of an abrasion about the integument, ingrown toe-nails, hang-nails on the finger, infected hair follicles, etc.

In pyorrhoea dentalis, and alveolar abscess, the entameba dentalis, streptococcus viridans, as well as other strains of streptococci and innumerable bacteria, are usually to be found.

The entameba pave the way and furnish a home and breeding place for the proper growth and development for the different strains of streptococci and other forms of bacteria, by dissecting down to and around the alveoli, and devitalizing the tissues; while it seems that the different strains of streptococci escape through the blood channels and lymph channels, carrying some of the infective micro-organisms with them, such as streptococci, diplococci and various others, and gaining lodgment in some suitable tissue, with the proper environment, or where some injury or devitalizing agent has lowered the resistive powers until they have become an easy prey to the invading host.

From other sources about the head and throat, viz., sinuses and tonsils, we have other forms of infection, which seem to slightly differ owing to environment, to focal infections elsewhere, and the strepto-, pneumo- and diplococcus variety from the tonsils seem to usually attack the joints and endocardium without setting up suppuration, however we may have a mixing of infections from different foci, or a mixed infection from the same foci which may do any degree of destructiveness to joints, synovial membranes, endocarditis, either benign or malignant, pericarditis, myocarditis, etc.

Rosenow and others have made blood cultures of patients suffering with malignant endocarditis and other forms of systemic diseases, and isolated the different strains of streptococci and their accompanying infections, and definitely compared them with cultures from isolated foci, and proved their exactness; also

---

\*Read before Section on General Medicine, Medicine Park, May 9, 1917.

that the intravenous injection of the different strains of streptococci into animals produces acute rheumatism, endocarditis, myocarditis, and pericarditis, and are not confined alone to joints and heart structure; but Rosenow has isolated different strains, the culture of which have their different affinity for different structures of the body, and following the intravenous injections of certain strains, produce a high percentage of stomach ulcer with some, a high percentage of appendicitis, and likewise cholecystitis in others, and particularly speaking, cultures from stomach ulcer or from appendicitis, cholecystitis, etc., seem to retain the selective affinity for the same tissues when injected into other animals.

Pyogenic bacteria may reach any part of the alimentary tract or its appendages, directly through the medium of food, water, saliva, etc., and by being swallowed may by chance reach the stomach when it is devoid of its germicidal powers by not having therein the acid gastric juice, or such may be in insufficient quantities to properly destroy them and they go on into the intestinal channel and mix with the normal intestinal flora and make very noxious the otherwise innocuous germs; or transmutation may be hematogenous or lymphogenous, being carried by the blood or lymph to any place of selective affinity. Adjacent and distal lymph nodes, when they become infected, as well as the metastatic involvement in other structures, become new foci, or depots, for further systemic infection, and I have no doubt that all forms of tuberculosis usually or most always come from foci of infection instead of through the inspired air, or being injected. We know that the bone and joint tuberculosis are hematogenous or lymphogenous and we well know that the skiagraph of an early case of pulmonary tuberculosis shows the infiltration of bronchial lymph glands, long before we have the infiltration of lung tissue, when compared with a skiagraph of a more advanced case of pulmonary tuberculosis.

From gonorrhoeal infections of the urethra, prostate gland, seminal vesicles, uterus and tubes, when we have a metastasis it shows a strong predilection for the tendon sheaths, setting up a teno-vaginitis, but often attacks the joint structures and particularly in women the wrist joint is often attacked; any of the joints in either sex may not escape and there is a strange tendency toward suppuration and grave destruction to the joint and when the heart is attacked it is usually malignant, owing to the consequent suppuration and ulceration.

Aside from the diseases aforementioned, we will have almost daily or even many times a day, pictures of premature old age, hypertension, vascular sclerosis, nephritis, (from acute nephritis we sometimes have a suppurative nephritis, or a pyelitis) or the well named "cardio-vascular renal disease" which on several occasions I have witnessed the removal of known foci of infection and the disappearance of the evidences of senility, and in one case I can mention where there was a systolic pressure of 260 mm., there had been previously a cerebral hemorrhage and paraplegia. Some months after she fell into my hands, her paryalsis improved some; her tonsils were infected badly, she had pyorrhoea and alveolar abscess; X-ray showed pus and pus pockets about the roots of almost all of the teeth, whereupon tonsils and teeth were removed, and "time turned rapidly backwards" for her until she reached the proper stage of her life for one of nearing fifty years, and her paralysis rapidly improved until she has moderately good use of herself.

I know of numerous other cases with similar results of which I will not burden you, and we have all had the pleasure of seeing the beneficent results of removal of diseased tonsils and adenoids on many cases of rheumatism and chorea, as well as pale and strumous children, and cachectic adults.

We sometimes have a less virulent form of infection in the joints, the streptococcus and gonococcus, and even other mixed infection, where the tissue reaction is less than when attacked by streptococcus pyogenes or the more virulent types of gonococcus; such a condition is called chronic arthritis, or arthritis deformans—there is a fibrinoplastic exudate and an attempt to wall off the invading micro-organism.

The hyperplastic exudate in and around the structures of the joint tend to obliterate the nutrient vessels, lessen cell nutrition and oxidation, the tendon sheaths and muscles are attacked, tendons becoming bound down by adhesions, muscles contracted distorting the joint, there are hypertrophic changes in some structures, and atrophic changes in others, adhesions of synovial membrane, calcareous deposit in the joint structure causing ankylosis; this feature is especially true when the tubercle bacilli are among the offenders.

When the joints are once affected and the arteries are rapidly becoming obliterated, if the source of the foci of infection is not sought and removed, it is easy for the same infection to pass hematogenously into and gain lodgment in the obliterated and partially obliterated vessels, and continue feeding infection to the surrounding structures, and so cause great morbid anatomical changes. About the same can be said of chronic nephritis, and chronic endocarditis, as to the causative factors of chronic joint disease, where we have a low grade, and non-purulent form of infection; where there is no positive chemotaxis, no severe reaction of the tissues, we have the chronic type of inflammation of these structures. The more severe types of infections, when accompanied by pyogenic micro-organisms, cause malignant endocarditis, and it seems that these different organs and structures attacked are from strains of infection from their own peculiar selective affinity.

Syphilis is a hemolytic disease where the spirochetes enter the blood and lymph channels from a foci called a chancre.

Malaria is a disease where the infection is floating in the blood, and since we know that tuberculosis attacks bone and joint structures by gaining access to them through the blood media, after they have had their resistive powers lowered by trauma, lowering of the temperature, mal-nutrition, etc., it is possible to suspect that many systemic diseases, such as pneumonia and many other diseases, may come about in the same way.

As to treatment I will leave it practically untouched, owing to the volumity of the subject. Much can be done to prevent focal infections.

Where foci are found they should be removed or drained whether there is systemic disturbances or not, and where there is systemic disturbance, we should begin making a thorough search, if necessary, of the entire anatomy for the depot of supply. It may be found as a pyorrhoea, teeth should be X-rayed, tonsils and adenoids examined closely, and even innocent looking tonsils may contain the most virulent forms of infections, as they are covered over with a thin film of membrane and cannot properly drain—the so-called buried tonsil, so a close search must be made and if only suspected, should be removed.

Infections of the accessory sinuses, the antrum, frontal, ethmoid or even mastoid, may give but little local symptoms and consequently be overlooked. The bronchi, intestinal tract and gall-bladder may be at fault, and a secondary foci which has resulted from some previous foci may give continued distal disturbances. Cervical lymph shows conclusively that there is a disease of the teeth or tonsils, and when original foci is destroyed it is often necessary to remove the lymph nodes to prevent further systemic disturbances, and especially is this true when tubercle bacilli are present. A thorough pelvic examination is to be made of all genital organs and adenexa for a possible foci.

As to treatment of systemic conditions after they arise and after the infecting foci has been found and removed if possible, our aim should be to limit the destruction of tissue as much as possible. Care for the nutritional power of patient, etc. Where possible drainage, and in joints with effusion, aspiration and injecting same with some form of antiseptic such as the 2 per cent formaline in glycerine, promote rest, alleviate pain, and produce elimination.



### Discussion.

**Dr. Lea Riely, Oklahoma City:** I heard a noted educator once say that in writing history we ought to write in terms of eons—at the times when we think great thoughts and produce something.

I think that in the history of medicine the discovery of focal infection is one of these eons—one of the periods in which great progress had been made, as in surgery, and the development of Lister's idea of asepsis. When the theory of focal infection was first advanced, it was taken with a grain of allowance, and we were rather skeptical as to its scientific value. Now, the research work done by the coterie of friends of Billings and Rosenow, in Chicago, and Dr. Price of the dental research laboratory, have, with the numerous clinical observations, put that beyond the peradventure of a doubt.

The subject is in scientific accord with Dr. Duke's paper, because the line of defense that these focal infections have built up around themselves is similar to that in the malarial districts. A man may live in a malarial district and not show any manifestation of malaria, yet when he gets into a salubrious climate, is subject to a surgical operation, or to depressing influence, this barrier may be broken down and he may then develop frank malaria. So in focal infection, the germs may be walled off from the general body by impermeable barriers until the body is weakened by some depressing influence, when you will get the systemic infection from these local points.

In the realm of nervous diseases we have germs which have a selective localization for the nervous system, and we get multiple sclerosis and other nerve lesions; in dermatology we find the teeth and tonsils productive of various kinds of dermatolysis; in internal medicine we find the kidneys and the general body involved from these dens of iniquity, which Dr. Hatchett has so graphically described.

We must not be over-solicitous in accounting for every disease by focal infection. We must strike a happy medium between the ultra-radical school, which emanates from the co-workers around the Presbyterian hospital in Chicago, on the one hand, and the ultra-conservative school surrounding the laboratory of the Johns Hopkins hospital. The clinical data which is fast accumulating has given us more than positive proof of the unfortunate effects of focal infection as an etiological factor, and our subsequent study of it will bring us along the right channel.

**Dr. R. H. Harper, Afton:** There is entirely too much indiscriminate use of stock serums and vaccines by the doctors who are not sufficiently familiar with the general principles of immunity and serology. The statements of the manufacturer are taken at their face value, the patient given a shot of serum, with about as definite an idea of the condition of the patient and the therapeutic value of the serum as the average layman who takes a patent medicine, believing the extravagant statements on the package; and such doctors have created a demand on the part of the public that the patient with pneumonia, erysipelas, grippe, and a few others, must have "serums," or the physician is accused of not "being up to date." Another class are those who abuse the serums of proven value. I have a personal knowledge of a sick child getting 120,000 units of anti-diphtheritic serum (furnished by the state) in a week; another of a scarlatinal sore throat that received immense doses of the same serums; another case of a doctor that did not believe in anti-typhoid vaccine, but the following spring used a cheap, irresponsible make of twelve or fifteen cases at \$5.00 per case; another of 80 or more patients having been given "anti-grippe" vaccine; such practices are on a par, financially and intellectually, with the use of patent medicines. I fully believe in and use serums and vaccines of recognized value, and am willing to take the statements of competent men as to the value of those in the experimental stage.

**Dr. L. J. Moorman, Oklahoma City:** I think no one, who keeps up with medical progress, could doubt the reality and importance of focal infection. How-

ever, I do believe that enthusiasm, not controlled by thorough investigation of such individual case, may carry us too far. Before making a diagnosis of focal infection, one must locate the focus of infection. Having determined that there is such infection, one must be sure that every focus is found, otherwise treatment may fail. After removing every demonstrable focus of infection (this is always good practice) we must be sure that there is no other causative factor in the case.

I recently treated a man who had complained of headache for two years. After having many prescriptions for his headache with no permanent relief, he was told by consulting physicians that he should have all his teeth extracted. This he did without an X-ray examination and in spite of the fact that his teeth seemed good so far as he could tell. In this case, the teeth, regardless of their condition, were not at fault, as the headaches grew worse. A few months later it was found, in the course of routine examination in the hospital, that he had a positive Wassermann. Specific treatment resulted in prompt relief of the headache and a gain of twenty-eight pounds in a few weeks. The last time I saw him he was working and trying to save enough to pay a dentist for replacing his teeth.

**Dr. A. B. Leeds, Chickasha:** When I left Chickasha, I promised myself that I would not say a word about focal infection, for fear some one would feel that I could not think of anything else, but I have enjoyed these papers so much that I am going to say a few words.

I believe that we, as physicians, do not follow up our cases carefully enough and are prone to take too much for granted.

Our greater menace in malaria is with the carrier, and it has been my experience in my consultation work that when the chills and fever have abated that the most of us feel that our cases of malaria are cured, but if you will take the trouble to examine the blood with the microscope of every patient with malaria whose fever and chills have ceased, you will be surprised to find what a great number still have the parasite in some form in their blood. Correcting the carrier is as important, to me, as eradicating the breeding places for the mosquito.

A correct diagnosis and a complete removal of all the foci of infection, particularly those in the teeth and tonsils, with an intelligent application of the proper serum or vaccine, certainly has a definite place in the practice of medicine.

Our lack of results and dissatisfaction with the serums and vaccines are generally due to carelessness in our work and not having a comprehensive idea of the limitations of what can be accomplished with these agents. You certainly cannot expect or anticipate or secure results with these agents when you have failed to discover and remove serious foci of infection; neither can you accomplish much if you do not remove all the foci.

If I had the time I would relate many cases where there was no question about the benefits and results obtained with these agents after the removal of all foci, and as I have said before in other meetings of this society, FOCAL INFECTIONS are little understood by the majority of the physicians and if we secure the results in the treatment of our cases that we should and our patients deserve, we will have to more thoroughly understand the subject of focal infections and make an intelligent application in the diagnosis and treatment.

If this subject is given your earnest thought and study and you will apply this information, you will be more enthusiastic than I am, for as I see these cases and see the results that we secure, I am becoming more so every day.

**SICK HEADACHE.\*****CHARLES WILLIAM HEITZMAN, M. D., Muskogee, Oklahoma.**

Not a great while ago a prominent alienist was invited to address his State association. The subject selected was "sick headache" and he talked, without notes, for about an hour. Later when the stenographic report was submitted to him for approval he denied having said anything it contained, commenting by way of explanation, that no sane living man would make such extravagant claims for the causes and cure of sick headache. I did not hear this particular address, but I have heard others and have read many more and in the majority of instances I have reached the same conclusion that the alienist did after reading the report of his own paper.

Perhaps it will be better for me to say in the beginning that I differentiate, and a real difference exists, between headache and sick or migrainous headache. I am sure that we will agree that the headaches due to eye strain, focal infections, and such determinable causes are curable provided the cause is located and removed. Possibly the following symptoms exhibited by a patient, without demonstrable cause will serve as a definition of "sick headache." The patient usually awakens in the morning with a general sense of depression, which he well knows is a precursor of the onset of his old enemy. He has no appetite, and, in fact during the acme of the attack the movements of the stomach are in abeyance. Soon the headache begins, usually on one side of the head, but not always. In different patients the onset is marked by various ocular disturbances, the commonest being scotoma, or specks floating before the eyes. These may be dark but often of brighter colors. This condition may persist for an hour or more. Occasionally illusions of geometric figures appear to which the term "teichopsia" has been given, which means like the lines of a fortification. The headache increases in severity as the hours go on, while the patient becomes fully prostrated by it and is obliged to lie down. At this time it is not uncommon for sensations to radiate to different parts of the body, notably the arm. In time the wretched nausea develops, until it terminates in actual vomiting, whence the term "sick headache." At times the vomiting relieves the patient, but usually the nausea persists for at least twenty-four hours. Although the attack of migraine may subside in one day, yet the sense of general nervous prostration may last for more than twenty-four hours. Right here permit me to say that I shall studiously avoid going into the pathology or cause of sick headache for obvious reasons, the main one being that I know nothing of them.

**The Cure of Sick Headache.** The cures that have been devised for this distressing complaint are endless, and I know of no better summary of them than an article from the facile pen of Dr. Joseph Collins, from which I shall quote quite liberally. This is the story: When the patient was young she was taken by her mother to the family physician who prescribed a new medicine at each visit, finally acknowledging his inability to cure the trouble. He consoled her, however, by saying that she would outgrow it, and they would disappear when she married. This statement proved incorrect, for she found that her husband was not a patent pain killer. After the birth of the first baby the aches returned with their old time frequency and many medicines were taken without avail. Then the doctor discovered a slight laceration and of course the headaches were reflex. She was curretted and repaired, recovers from the operation, but the headaches come on just the same. The next year she consulted an oculist and after an examination he was certain that all the trouble was due to astigmatism and "improper implantation" of the muscles, so he decides to plant them over. He did but ———. One year later another specialist finds floating kidneys, and in spite of the fact that the kidneys always float and the pain comes only once or twice a month, nevertheless they are anchored. Next Dr. Blank discovers that these headaches come from the

\*Read before the Section on General Medicine, Medicine Park, May 9, 1917.



liver. They are dependent upon "insufficient metabolism," here at last is discovered a pillar of strength and a tower of wisdom. In this particular case the capsule of the liver had stuck to that organ in the same way that a veil sticks to your face when it becomes wet. The doctor shook the sistrum and lifted the veil from the face of the goddess of metabolism. She was ill in bed for a long time after this, recovering from a capital operation. But the cross still remained with her and she now decided to give up doctors and fill her mind with love, the world beautiful, an abstract god and other pain preventives and misery mitigators. This worked splendidly until the first real headache came, and the idolized trinity vanished like the morning mist. Later, a friend who had been cured of cancer after having been given up by all the doctors, prevailed upon her to send for her wonder worker. He came and decided that the spine was dislocated and that the headaches flowed from that. Without an examination he promised a cure in about forty treatments. This spine proved, however, an obstinate one and forty interviews only served to establish a bowing acquaintance, so forty more were given with no particular effect upon the headache. Faith in the supernatural and the medical profession was lost after this experience and it was resolved firmly to have no more opinions from doctor or priest concerning the nature of the ailment nor to solicit advice as to a course to be adopted for its cure. These resolutions were made of course, during an interval when the headaches were not present. The next attack sent her to a physician that had been recommended to her husband. After a week under his observation and examinations a test breakfast was given, pumped out and analyzed, and behold; instead of being deficient as the other doctors had found her, she had too much acid. Thereupon began further examinations to determine the metabolic co-efficient and the elimination capacity. Finally it was decided that she was the director of a large manufacturing plant situated in her midst engaged in making poison. She was the whole consumer, and of course, the monopoly was not good for her. In fact it gave her headaches. In addition to the green vegetable diet and baked apples, a system of "irrigation" was established, and the exhibition of intestinal disinfectants. The only result of this treatment was that the patient wished Newton had used all apples for his experiments and that irrigation be confined to the arid regions of the west. She did not get well.

In conclusion I submit the paper for your earnest discussion trusting that you will lay especial emphasis upon the pathology and cause of this disease and if the time is not limited, give us a cure.

### CANCER OF THE BREAST.

Parker Syms, New York (*Journal A. M. A.*, Aug. 11, 1917), describes the anatomy and physiology of the breast, showing that it is one of the most variable structures in the body, constantly changing in structure and function. It would be impossible to recognize it structurally at any two times. He also describes its embryology as known, altogether showing that it is undergoing constant change during life. Its epithelium is in a condition of unrest. He briefly gives the pathology of chronic cystic mastitis which is in his view the predecessor of cancer. Our present conception of cancer is that it is a growth of more or less atypical epithelial cells, the distinctive feature being the fact that these cells are growing in the stroma outside the basement membrane. Today we believe that a cancer cell is an otherwise normal functioning epithelial cell which for some reason or other has taken on the faculty of independent growth. Practically all authorities agree that cancer of the breast is made up of cells from the true parenchyma of the gland. He gives the views of prominent authorities as to cystic mastitis being the predecessor of cancer of the breast, and says that usually in these cases the pathologist has studied only the tumor itself, and not the rest of the gland. Prolonged irritation is recognized as one of the most frequent contributing causes of cancer, and the growth of cystitic mastitis is really a response to some form of irritation and a progressive disease that will proceed to malignancy unless its progress is arrested. If we can learn just what are the precancerous stages we can certainly apply that knowledge to the prevention of cancer.

## HEMORRHAGE FROM RUPTURED OVARIAN CYST SIMULATING ECTOPIC PREGNANCY: CASE REPORT.

C. S. NEER, M. D., Vinita, Oklahoma.

That irregularity of menstruation may result from disease of the adnexa is well known. The regulatory influence which the ovary in some way exerts upon the periodicity, amount, and course of the menses, readily explains the common clinical observation that suppuration or tumors involving the ovaries may cause disturbed menstrual function. Even a corpus luteum cyst or a single retention cyst, according to the rather recent observations of Halban and Rubin, may delay the menstrual period, and this class of cases may very closely mimic ectopic pregnancy.

Assuming that Lawson Tait's doubt expressed in 1889, as to "whether a case of extra-uterine pregnancy had ever been diagnosed previous to rupture" is no longer justified, and that in the present state of our knowledge it is not too much to hope to diagnose this condition from the history and physical signs before the tragic rupture occurs, cases like the following should be of interest:

A young unmarried woman believed to have had opportunity for pregnancy, missed a menstrual period and then began to suffer with rather severe cramp-like pains in the lower abdomen, followed by a flow which continued three or four weeks with slight fever. The tenderness made satisfactory examination impossible at that time, but pregnancy, intra- or extra-uterine being suspected, curettage was carefully done. The uterus was found empty and only slightly enlarged. After the curettage the flow continued irregularly and a few days later a mass was discovered per vaginam on the left side of the uterus. A laparotomy was done and a corpus luteum cyst a little larger than a tennis ball was found and removed with relief of symptoms. The tubes and right ovary were nearly normal.

Here we had the essential points in the history and signs which might well belong to extra-uterine pregnancy—amenorrhea followed by cramping pains in the lower abdomen and a flow from the uterus with the presence of an extra-uterine mass of proper size and consistency. This case is not reported because of its rarity, but as illustrative of a syndrome which I believe is not uncommon, and which may present a diagnostic problem of considerable difficulty.

Rubin suggests that some of these cysts may result from early death of the embryo either within the uterus or within the tube, the ovum in these instances disintegrating and absorbing without hemorrhage external or internal. He thinks that "in all probability many non-tragic ectopic pregnancies terminate in this way."

That this simulation of ectopic pregnancy by an ovarian cyst may go further, culminating in rupture of the cyst with serious intra-abdominal hemorrhage was forcibly brought to my attention by another case:

The patient was a woman twenty-nine years of age, the wife of a farmer; married twelve years and never pregnant so far as she knows. The menstrual periods were usually regular and somewhat painful. During the past year there had been several attacks of moderate pain in the lower part of the abdomen. About one week before she had quite a severe attack but did not call a physician. On March 8, 1917, having gone five days over the time for her regular period, but feeling as well as usual, she went out to milk and while stooping was seized by a pain in the lower abdomen and soon became faint. Dr. J. O. Bradshaw, who was called, found her in collapse, the pulse very weak and 130 in frequency and made a diagnosis of ruptured ectopic pregnancy. Four hours later when I saw her the pulse was 130 but had somewhat recovered its volume. There was marked tenderness over the entire lower abdomen. Vaginal examination revealed an ill-defined mass on the right and a sensation as of a soft mass (clots) in the cul-de-sac on the left. The uterus was rather immovable and little idea of its size could be had with any justifiable examination. On opening the abdomen six hours later by a median incision, clotted blood was found under the peritoneum and the pelvis was filled

with blood. The source of the bleeding was found to be a cyst of the right ovary. The cyst was the size of a lemon, and the rupture in it was large enough to admit the tip of the finger. The walls were fairly thick and we took it to be a cyst of the corpus luteum variety. The tubes showed some evidence of previous inflammation and the uterus was retroverted, the fundus lying under the cyst and a mass of adhesions, making it difficult to locate. The left ovary appeared hard and fibrous and it was thought best to remove it with the tubes. The fundus was brought forward and held there by shortening the round ligaments. Recovery was without incident.

A search of the literature by Novak in April, 1917, indicates that this form of abdominal hemorrhage is rare, there being up to that time only forty cases reported. This case would apparently be, therefore, the forty-first on record. Novak reports a case of hemorrhage from an ovarian cyst on the right with a coincident unruptured tubal pregnancy on the left.

Trauma seems to be a factor in determining the rupture in a number of the cases. Several have been reported in which a cyst has ruptured during bimanual examination, most of them without any bleeding of consequence. However, Marshall reports one case in which a severe abdominal hemorrhage occurred during examination. Von Breust in 1914 reported that of thirty-six cases of hemorrhage from ovarian cyst, (all that he was able to collect from the literature at that time) trauma played a role in nine. In a case reported by another author the patient is said to have died immediately after washing clothes. In another rupture occurred during a dance. In two others rupture occurred from intra-partum compression. In my case the patient was stooping to milk.

Some of these cases in which the right side is involved have been diagnosed acute appendicitis. In most of the cases a diagnosis of ruptured ectopic has been made, and it is probably impossible in patients in whom there has been a chance for pregnancy, to differentiate between the two before operation. It is however, important to bear in mind, before and during operation in these patients, that a history of irregular menstruation with a mass by the side of the uterus, followed by a sudden pain in the lower abdomen with collapse and intra-abdominal bleeding, is not *prima facie* evidence of ectopic pregnancy.

---

### HEMIHYPERTROPHY.

H. Cohen, New York (*Journal A. M. A.*, Aug. 11, 1917), reports a case of hemihypertrophy with increased sugar tolerance. The hypertrophy was on the right side, involving the right leg from the middle of the thigh down. It gave no discomfort. The Roentgen examination showed marked changes in the bones about the knee, ankle, tarsal articulation and tarsal phalanges. The left leg was normal in all respects. Examination of the chest and head showed no enlargement of thyroid, thymus, or pituitary, and there were no functional disturbances in the organs. The sugar tolerance was tested as follows: The patient was given 150 gm. of glucose in coffee by mouth twelve hours after the last meal. The urine was tested for sugar in a specimen the following hour, and for the next five hours and in a complete twenty-four hour specimen. The glucose given was increased 50 gm. daily until 650 gm. had been given at one time without its appearance in the urine. Following the last test the sugar content of the blood was 0.088 per cent. Cohen advances no theory of his own for the hypertrophy which had gradually increased from birth to adolescence.



## ACIDOSIS OF PREGNANCY.\*

WINNIE M. SANGER, M. D., Oklahoma City, Oklahoma.

The term, acidosis, formerly suggested the acetoneuria of diabetes, but recently, we apply it to the gastro-intestinal disorders of childhood, acute yellow atrophy of liver, eclampsia, pernicious vomiting of pregnancy, and other auto-intoxications, or during a physiologic starvation.

In pregnancy, we have the additional factor of foetal elimination, together with maternal waste products, in the disturbed metabolism. While we know little of foetal regressive metabolism, we do know that the placenta carries the products to the maternal liver, where they probably undergo further changes, to be finally excreted in the urine of the mother.

It is easy to see that abnormalities of liver, or kidney function during the pregnant condition, may predispose to serious pathological conditions.

French writers insisted, since Bonchard's time, "that all pregnant women suffer more or less from auto-intoxication, resulting from poisonous substances in the blood, holding that the correctness of such a view is clearly demonstrated by an increase in the toxicity of the blood serum, and a decrease in that of the urine, as shown by the effect after injection, into the circulation of rabbits. Since that time, other investigations are skeptical of such conclusions, on account of the many other factors.

Nevertheless, French observers have made a closer study than many others, and claim all pregnant toxemia results primarily in hepatic lesions, or thrombotic processes, so calling it hepatoxemia, because hepatic metabolism is so interfered with that certain poisonous substances ordinarily rendered innocuous by the liver, gain access to the blood.

German observers claim that degenerative changes in the tubules of kidney were brought about by alterations in the arterial pressure, by the interference with the renal circulation incident to gestation. In proof of this, they claim that albumen was present in from 50 to 50 1-2 per cent of all cases tested, the 50 per cent including the traces, also, and the 50 1-2 per cent abundant amount. In Johns Hopkins, 1000 tests showed traces in 50 per cent and abundance with tube casts in 7 1-3 per cent.

The first condition, for which we make a urinalysis of the pregnant woman, is hyperemesis—when morning sickness is so serious as to cause the patient to seek the physician—as it does in about half of all cases between the 6th and 14th week, as an average. According to the patient, each one thinks it is a serious and troublesome symptom, but according to many statistics, is not so but once in 1000 cases.

Pernicious vomiting, constantly nauseated and vomiting whenever attempting to take food, results fatally in 50 per cent of cases according to Merle, if medicines alone are the treatment for the condition.

Whenever her storage supplies in lymphatics is used up, she starts on a period of actual starvation, and then we have true acidosis, the pulse increased, temperature elevated, with various interpretations.

The causes of this condition have been classed by Williams, under three heads: (1) Reflex, (2) Neurotic, (3) Toxic. He believes most cases come under the third class, as shown by the urine, in which there is a decided decrease in the amount of nitrogen excreted as urea and a marked increase in the amount put out as ammonia.

When Doremus' ureometer shows less than 20 to 24 grammes per day of urea, with albumen present, the patient is in a serious condition, and should be watched with urine tests, and treatment, of rest in bed, restricted diet, preference milk,

\*Read before Section on Pediatrics and Obstetrics, Medicine Park, May 9, 1917.

saline drinks, laxatives and sweat baths; and if no decrease in albumen, and an increase of urea, then the prognosis is serious, and the problem of terminating labor, becomes one for immediate consultation.

The retention of urea is not the cause of the toxemia, but shows that waste is not being eliminated. The ammonia co-efficient is the laboratory test of this.

Williams attributes the increase of ammonia nitrogen to a disturbance of the liver, consisting of a destruction of the central part of the lobule.

Other observers produce claims that this excess of ammonia nitrogen is not especially characteristic of vomiting of pregnancy, but due to starvation, or rejection of food, in fevers and wasting diseases, which, because of diminished alkalinity of blood, is a true acidosis.

These patients almost invariably complain of sour stomach, or heart burn, which is another acidosis, frequently relieved by milk of magnesia.

Liquid diet sometimes helps, but Dr. Kolopinski experimented on *stimulating* the natural functions of the stomach, by a heavier breakfast of ham or bacon, without liquid, and reports frequent success.

In reflex nausea, when the circulation of the stomach is poor, and motility slow, electricity is a good stimulant, and external massage—also emetine, provided retroversion, cysts or myoma are not causes in the pelvis.

When broths, or cereals, and lactose are not retained, a rectal enema of saline solution and dextrose and peptonized milk, drop method, sometimes prove of great value.

All pathological pelvic conditions should be looked after, pessaries used when possible to correct displacements, and glycerine and iodine tampons to cervix uterus, when erosion is found.

The tongue is often an indication of acid toxemia, and tells us if elixer of pepsin and hydrochloric acid would be of any service.

Abortion as a final solution is probably not necessary more than once in 1000 cases and when necessary, should be under same care as any other major operation.

Salivation, and gingivitis are abnormal secretion excesses—often merely symptoms of systemic toxemia, and resisting local treatment, the first helped by milk diet, the second by abundant diet.

Calcium lactate or lactophosphate of lime, follows the dentist's treatment for teeth disturbance and other metabolic derangements. Oedema of lower extremities, or general, is an acidosis condition, if the urine is disturbed, and always a symptom of serious import, calling for physician's skill and care.

As to blood pressure, we do not find an increased blood pressure in early stages of albuminuria. Murphy has proved by experiments with compression of the arteries above the origin of renal arteries that albuminuria may be occasioned, but not produced by venous compression.

Brown advances the view that the custom of restriction of proteid diet in functional albuminuria, and in nephritis, is objectionable, and in this I fully agree, having positively proven that moderate use of proteids, or balanced diet, will preserve nutrition, and not overwork the kidneys.

**Treatment—Prophylactic:** Every pregnant woman should engage her physician as soon as she can determine her condition. She should consult her physician often enough to receive instruction on the normal and abnormal symptoms.

The physician should charge enough to cover the cost of urine examinations—every month for first 5 or 6 months, every 2 weeks thereafter, if any complaint whatever of abnormalities.

So long as the body is able to oxidize a sufficient amount of carbohydrate, acetone remains low when diacetic acid indicate a grave disorder of metabolism—appearing in late stages of malignant diseases exanthemata, and acute degeneration of liver, oxybutyric acid follows this stage.

We must go more deeply into the chemistry of the liver secretions and urine, and fit our laboratory in our own office for necessary tests, for acidosis of pregnancy can result so seriously to mother and child that we must prevent the morbidity, and decrease mortality by all the scientific methods obtainable.

### ADYNAMIC ILEUS: REPORT OF TWO CASES.

IRA W. ROBERTSON, M. D., Henryetta, Okla.

**Case 1.** Mrs. T., age 39, married, mother of four children, all alive and well. Has always been strong and healthy. She had an attack of appendicitis November 18th, 1916. Entered the hospital November 30th with temperature 102, pulse 116. She had what appeared to be a large appendiceal abscess. An incision made over the most prominent part revealed a large vascular mass. The adhesions had passed the simple stage of agglutination and were next to organics. Any attempt to separate them caused profuse oozing. It was one of those conditions Murphy described in the August Clinic, Vol. 4, 1912.

I inserted a drainage tube and put the patient to bed. In twenty-four hours the temperature had dropped to 99 and pulse 96. The day following the temperature was normal and remained so during her stay in the hospital. The drainage was removed in 72 hours. The patient given a dose of oil. Up to this time, all had gone well. Now she began to have pain of a cramp-like nature with vomiting, which continued with more or less severity for three days and nights. It practically ceased on the sixth day. Meantime, temperature was normal. Pulse 112. Very little gas. No distention at all. She was taking water, albumin, panopeptin, etc. Occasionally she would cramp some and eruct large quantities of greenish fluid. There was no odor to the vomit or to her breath. This state of affairs continued until the 14th day when the bowels moved freely, after which there was no further trouble. She left the hospital December 22nd, twenty-two days after operation, since which time she has remained well.

**Case 2.** Mr. M., age 34, had always been healthy except occasional attacks of appendicitis, the past three years. This attack was harder and longer than any previous one. He entered the hospital January 2nd. Thirteen days after the onset of his last attack. His temperature normal. Pulse 96 (probably due to nervousness). He had taken purgative and bowels had moved freely. He denied having any elevation of temperature the past week. An incision was made in the usual manner over McBurney's point. The omentum was adhered to the peritoneum and the bowel to the omentum. In this region the vessels were highly engorged. As Murphy put it, the adhesions were organic, but yet in the green state. I put in a drainage tube and closed up. In twenty-four hours, the dressing was saturated with a serous exudate and pus. The drainage was removed in 72 hours. Thereafter there was little drainage. Everything went well until the fourth day when he began cramping and vomiting. This continued for two days and one night. On the evening of the fifth, the patient appeared to be a very sick man. He had not slept or rested a moment, nor could he retain water. The temperature was normal. Pulse 120. There was no gas or distention. The bowels had not moved. I ordered a hypodermic of morphin 1-4, atropine 1-100, and to repeat atropine in three hours. Patient went to sleep, rested well and woke up feeling good. He did not vomit again for six days. During this period, had very little cramps. Took large quantity of water albumin and liquid foods. On the eleventh day, patient suffered a relapse. Vomited nearly a quart of dark offensive fluid, having a fecal odor, after which he had a small bowel movement. The following morning, the twelfth, he vomited another quantity, having a fecal odor. Soon after this he was taken with violent cramping, following by copious and repeated bowel movement. After this, he had no trouble while in the hospital. He was up and out on the nineteenth day.



**JOURNAL OF THE OKLAHOMA STATE MEDICAL ASSOCIATION**

VOLUME X

SEPTEMBER, 1917

NUMBER 9

PUBLISHED MONTHLY AT MUSKOGEE, OKLA., UNDER DIRECTION OF THE COUNCIL

DR. CLAUDE A. THOMPSON, EDITOR-IN-CHIEF

ENTERED AT THE POST OFFICE AT MUSKOGEE, OKLAHOMA, AS SECOND CLASS MAIL MATTER, JULY 28, 1912

THIS IS THE OFFICIAL JOURNAL OF THE OKLAHOMA STATE MEDICAL ASSOCIATION. ALL COMMUNICATIONS SHOULD BE ADDRESSED TO THE JOURNAL OF THE OKLAHOMA STATE MEDICAL ASSOCIATION, 307-8 SURETY BUILDING, MUSKOGEE, OKLAHOMA.

The editorial department is not responsible for the opinions expressed in the original articles of contributors.

Reprints of original articles will be supplied at actual cost, provided request for them is attached to manuscript or made in sufficient time before publication.

Articles sent this Journal for publication and all those read at the annual meetings of the State Association are the sole property of this Journal. The Journal relies on each individual contributor's strict adherence to this well-known rule of medical journalism. In the event an article sent this Journal for publication is published before appearance in the Journal, the manuscript will be returned to the writer.

Failure to receive the Journal should call for immediate notification of the editor, 307-8 Surety Building, Muskogee, Okla.

Local news of possible interest to the medical profession, notes on removals, changes in address, deaths and weddings will be gratefully received.

Advertising of articles, drugs or compounds not approved by the Council on Pharmacy of the A. M. A. will not be accepted.

Advertising rates will be supplied on application. It is suggested that wherever possible members of the State Association should patronize our advertisers in preference to others as a matter of fair reciprocity.

**EDITORIAL****MORTALITY AMONG DOCTORS AT THE FRONT.**

A sensation was caused at the New York meeting of the A. M. A. when Dr. Franklin Martin was quoted by the Times as stating in a speech that he had been advised by Mr. Balfour or some other person connected with the English and French Mission to this country, that in one hour during a certain retreat the English had lost 267 surgeons, while the French had lost 400 in one day. This statement was made as showing the urgent need of physicians for the service to replace those lost.

We quoted Col. T. H. Goodwin of the British Medical Service last month as stating that the total loss from all causes since the war of English surgeons had been less than 2 per cent of those employed.

Time seems to clear up many erroneous impressions and halts much misinformation from its round of damaging sensationalism. Col. Goodwin is now quoted in the National Service Handbook as stating, after cabling England for the exact figures, that they had lost from the beginning of the war to June 25, 1917, killed 195, wounded 707, total battle casualties 902, in addition 62 medical officers have died from sickness. Col. Goodwin says: "All statements to the contrary are false, arising from mistake, natural exaggeration, or from a deliberate and malicious attempt to discourage doctors from entering the medical service of the Army."

When we consider that these figures embrace the casualties at Gallipoli, the Mesopotamian campaign and the disastrous battles fought in the early stage of the war against superior odds, and especially when every branch engaged was constantly being forced back day and night with hardly breathing time to take one position before being driven from it, the figures are not alarming, though exceedingly regrettable.

## NO MEDICAL DEFENSE IF APPLICANT WAS NOT IN GOOD STANDING.

We must again call attention to the rule that medical defense can under no circumstances be accorded a member if he was not in good standing at the time of the alleged malpractice and when he had notice that the suit was about to be filed. The Medical Defense Fund is not similar to Indemnity Insurance against alleged malpractice, the former is exactly like that provided in all other states having that feature in its membership plan while the latter is a warranty against all loss up to a certain amount if the alleged malpractice occurred in the written limits stated in the policy's face.

The Association's officers regret that they cannot go to the rescue of every man charged with malpractice, for long experience teaches us that most all of such cases are baseless. But to defend those not in good standing would be an injustice to those who keep in good standing, among other reasons for the very purpose of having defense if they should need it, so in such cases defense must be denied.

The Medical Defense Committee takes occasion to protest against misinformation and misstatements in this connection. Every member has ample warning, and more than once that his membership is about to lapse, that he is about to lose the privilege of malpractice defense should he need it, so the blame rests squarely upon the complaining member and not the committee.

---

## USE THE X-RAY.

Our members are urged in every case of fracture, real or suspected, to use the X-ray when available. Courts have ruled where bad results followed fractures, and the X-ray was convenient to that case, but not used, that the knowledge gained from such examination might have achieved a different result and have held the physician to be negligent in not giving his patient the benefit of a reasonable safeguard.

Whenever practicable, pictures should be made after reduction and dressing to see if the treatment has delivered the results sought. Such pictures thoroughly advise the physician and place him in the attitude of having performed his duty to the patient in a proper manner and go a long way toward satisfying all concerned. It is not necessary to say that in the event of trouble long after the case is forgotten, except that the physician has not yet been paid for his services, the record will be clear and a counterclaim for damages will fall to the ground.

---

## GRADING THE SANITARY CONDITIONS OF SHOPS.

The Board of Health of Portland, Oregon, is establishing a card system for the purpose of showing customers the relative care given the sanitary conditions of the shops of that city. Stores handling food products are required to display "A" cards, indicating that they score 90 per cent or over according to the board's requirements. "B" indicates that the methods of the shop are only up to 80 per cent, while "C" covers everything under 80 per cent.

The cards must be displayed where customers may easily see them.

Portland has long been jealous of her rating as the second healthiest city in the Union and by this move hopes to raise the rating. It is said that the plan immediately made a marked improvement in all the stores and that merchants advertise that their stores are in the 100 per cent class.

This system would be worthy of emulation in our own state. We would like to see a "0-" sign hung in some of the cheap restaurants and shops of this state. They have that designation coming to them.

## SENATOR OWEN ATTEMPTS TO INCREASE NUMBER AND RANK OF ARMY MEDICAL OFFICERS.

On July 20th Senator Owen introduced in the United States Senate a bill proposing to radically change the existing personnel of the Army. He would provide for a Major and Brigadary Generals largely in excess of the present number, thus creating in the Medical Department sufficient officers of high rank to adequately handle the situation.

Senator Owen quotes at length the writings of Victor C. Vaughn and others, stating that Vaughn's views represent the ideas of the medical profession without a known exception. He also quoted at length from the evidence adduced at some of the hearings on the Chickamauga disaster of the Spanish War, showing how utterly useless and dangerous it is to rely on even the smartest line officers to handle matters of sanitation.

There is no question of the justice and common sense in these demands. Every European Army has a larger proportion of high ranking medical officers than the Army of the United States.

## CURRENT MEDICAL LITERATURE

Conducted by

DRS. CURT von WEDEL, Jr., and L. J. MOORMAN, Oklahoma City  
and FRED J. WILKEMEYER, Muskogee

### TUBERCULOUS PERITONITIS.

(B. T. Cashmere)

*American Journal of Medical Sciences*, August, 1917.

Tuberculous peritonitis is a condition that occurs much more frequently than is recognized. First, because of its latency. Second, because the diagnosis is often obscure. It may occur at all ages but its occurrence is more frequently between twenty and thirty years of age. It usually follows tuberculous lesions elsewhere, primary tuberculous peritonitis being rare. It follows chiefly pulmonary tuberculosis. In women it is frequently associated with under development of the genital organs and sterility. The disease occurs in three forms. Miliary 68 per cent, chronic adhesive and chronic ulcerative. Blunt pressure is usually low. Blood count as is usual in other tubercular infections, tuberculin tests are limited value.

In the ascetic form it is sometimes difficult to diagnosis from cirrhosis of the liver or from ovarian cyst. It is usually dangerous to tap because of adherent intestine to abdominal wall. Even though fluid were obtained, it is of little diagnostic value because tubercular bacilli are seldom found. The only positive way of diagnosis is by injecting in pigs. The prognosis of tuberculous peritonitis is good; given adequate medical care, fifty per cent should recover without operation. Those cases which refuse to subside under rest should be operated upon. Following operation, all cases should be given prolonged rest and forced diet in the open air. One should never drain these cases as fatal fistula often develops. One of the best means of local treatment is prolonged exposure to the direct rays of the sun, beginning daily in short intervals, gradually increasing the time of exposure and the amount of body surface until the body is well tanned.

### BY WARSTAT (DUTSCH. ZTSCHR. f. CHIR. 1917).

The effect of unilateral extraction of the intercostal nerves upon the lungs and its tuberculous disease.

The author has performed several experiments upon rabbits to determine the effect of paralyzing the intercostal nerves. The unilateral exclusion of breast movements by means of paralyzing the intercostal nerves so quited and collapsed the corresponding lung, that it must favorably effect if tried on a tuberculous process in the lung and promote its healing. He did a similar operation on two patients with lung tuberculous with excellent results.

### A FURTHER STUDY IN THE USE OF IODINE IN COMBATING PERITONITIS.

(J. A. Crisler)

From transactions of the Southern Surgical and Gynecological Association.

The author believes in the extensive use of iodine poured directly into the free peritoneal cavity, stating that he has never seen toxic effects.

After opening the abdomen he immediately bathes all surface with iodine with as much as thirty ounces. He drains all cases, reports a negative mortality.



## PERSONAL AND GENERAL NEWS

**Dr. I. I. Ramey**, Drumright, has moved to Clinton.

**Dr. J. B. Lightfoot**, Muskogee, has moved to Miami.

**Dr. W. F. Hayes**, Claremore, visited Colorado in July.

**Dr. V. Berry**, Okmulgee, is attending Baltimore clinics.

**Dr. A. S. Risser**, Blackwell, visited the Mayo Clinics in August.

**Dr. Thos. Dowdy**, New Wilson, is in New York doing special work.

**Dr. W. R. Leverton**, Cloud Chief, it is announced will move to Hobart.

**Dr. J. N. Harber**, Seminole, is making an automobile tour of Colorado.

**Dr. and Mrs. E. M. Thompson**, Cleveland, motored to Colorado in July.

**Dr. W. E. Dicken and family**, Oklahoma City, are driving through Colorado.

**Dr. C. B. Taylor and family**, Oklahoma City, are touring Colorado by automobile.

**Dr. J. P. Cowman and family**, Comanche, have returned from a visit to California.

**Drs. F. D. Meek and C. D. Ferguson**, Oklahoma City, motored to Colorado in July.

**Dr. J. Hutchings White**, Muskogee, attended the New York and Boston clinics in August.

**Dr. and Mrs. Edward F. Davis**, Oklahoma City, are summering at Harbor Point, Michigan.

**Dr. T. E. Sturgeon and wife** are visiting New York, where Dr. Sturgeon will attend the clinics.

**Dr. Bruce Watson**, health officer Noble county, has condemned the municipal water supply of Perry.

**Dr. and Mrs. J. C. Watkins**, Checotah, have returned from a several months visit to Chicago clinics.

**Drs. R. Culberson**, Hoyt, and **R. C. McCreery**, Erick, have passed their examinations for the M. R. C.

**Dr. Rex G. Bolend**, Oklahoma City, entertained a number of his professional friends with a smoker July 27.

**Dr. J. R. Allen**, Caddo, and Miss Lottie W. Ferguson, McKinney, Texas, were married at McKinney June 26.

**Dr. R. N. Holcomb**, St. Louis, has located in Muskogee and formed a partnership with Dr. J. Hutchings White.

**Dr. H. E. Breese**, Henryetta, is in California on a visit. He will do some postgraduate work in the University of California while away.

**Dr. J. Hutchings White**, Muskogee, has been appointed to fill the vacancy in councilor body, vice Dr. P. P. Nesbitt who is now in France.

**Dr. Amos Avery**, Sapulpa, is touring the northwest by automobile. He will visit Denver, Portland and Seattle hospitals during his absence.

**Dr. J. C. Watkins**, Checotah, has offered the Commercial Club of that town to build a substantial hospital if the Club will raise a bonus of \$1500.00.

**Dr. J. A. Westfall**, Supply, was rejected on physical examination for Medical Reserve Corps. Drs. Ernest Stecher, Supply, and W. L. Rose, Woodward, passed.

**Dr. J. M. Postelle**, Oklahoma City, will take charge of the work of Dr. A. E. Davenport, health officer of Oklahoma County, during Dr. Davenport's absence at the front.

**Drs. Fred S. Clinton**, Tulsa, John W. Duke, Guthrie, and F. B. Fite, Muskogee, have been appointed as medical members of their respective District Exemption Boards.

**Dr. Ross D. Long**, Oklahoma City, who spent a year in the 23rd British Expeditionary Hospital, in France, has joined the Medical Reserve Corps and goes to Ft. Riley for service.

**Dr. and Mrs. A. W. White**, Oklahoma City, are touring eastern points. During the trip Dr. White will visit eastern medical centers and then join Mrs. White at Ludington, Mich.

## DR. SAMUEL G. WISHARD.

**Dr. Samuel G. Wishard**, of Watonga, died early in August after an illness of short duration. Dr. Wishard was 74 years of age at the time of death and had retired from practice about two years ago. He was one of the early practitioners of Blaine County, and had a host of friends in his community. He was born in Winchester, Guernsey County, Ohio, taking part in the civil war with the Army of the Cumberland, and shortly after that came to the southwest where he had since lived. He is survived by a son and daughter. His body was sent to Ohio for interment by the side of his wife.

### THOMAS J. LEE.

Dr. Thomas J. Lee of Rocky, died suddenly August 6th after a short illness. He had not been in good health for some time, but was able to be up and attend to some of his work immediately prior to death.

Dr. Lee was born in Monroe, North Carolina, October 19, 1860, receiving his preliminary education in Mercer University and graduated from Vanderbilt Medical Department in 1883. He was located at various times in Georgia and Alabama, and lived at Pauls Valley, Hobart and Rocky since 1895. He had held various posts as officer of medical societies, and for a time was a councilor of the State Medical Association.

Dr. J. L. Lewis, Lawton, is moving to Joliet, Illinois.

Dr. J. I. Ramey has moved from Drumright to Heavener.

Dr. W. H. McKenzie, Enid, visited New Mexico in August.

Dr. J. C. Johnstone, Blackwell, is doing special work in Chicago.

Dr. J. L. Reich, formerly of Wagoner, has located in Florence, Kans.

Dr. J. B. Liesure, Watonga, has returned from a visit to Chicago clinics.

Dr. C. E. Collins, Gould, is convalescing from an operation for appendicitis, performed at the Altus Hospital recently.

Dr. Fred Y. Cronk has moved to Tulsa and is associated with Dr. Ralph V. Smith. They were formerly associated in Guthrie.

**Ordered to report:** Drs. Carl Puckett, Pryor, to Ft. Sam Houston; C. R. McDonald, Broken Bow, to Ft. Riley; Ernest Nummery, Granite, to Ft. Sam Houston.

Clinton will have the capacity of its city hospital doubled if the proposition of Dr. McLain Rogers is accepted. Press reports indicate Dr. Rogers will make the addition at his own expense.

Dr. W. Eugene Dixon, Oklahoma City, entertained a large number of the city's medical profession with a smoker at his residence July 21. During the day a clinic in honor of out of town guests was held at the University Hospital.

Dr. Frank P. Davis, Enid, announces that he will enter the race for the nomination for governor on the Democratic ticket in the August, 1918, primaries. Dr. Davis made the race for lieutenant governor several years ago and at that time made a good showing.

Okmulgee County has perfected a county health organization, several thousand dollars having been pledged to further the work. Mayor Ira Martin, Henryetta, was selected president; Mayor O. K. Peck, Okmulgee, vice-pres. A committee consisting of prominent citizens of the county was appointed to raise funds and supervise the work generally.

The Census Bureau, Washington, has issued a letter to physicians throughout the United States asking closer cooperation in securing correct death reports. The action was prompted on account of the tendency to write inaccurate and incomplete death reports, especially as to tuberculosis, and in order to remedy the defects physicians making such reports are asked to carefully conform to the rule calling for statement as to occupation, etc., of deceased.

**Medical Reserve Corps Happenings.** Commissions issued to: Drs. A. E. Davenport, Ross D. Long, George Hunter, Oklahoma City; C. L. Wellman, Geo. C. Bryan, R. L. Westover, Okmulgee; L. L. Bunker, B. T. Bitting, Enid; P. F. Herod, El Reno; W. W. Rucks, Guthrie; W. E. Harrington, Wakita; D. E. Little, Eufaula; H. McQuown, Stillwater; G. S. Barber, Lawton; W. B. Newton, Muskogee; F. C. Myers, Broken Arrow; T. J. Palmer, North McAlester; R. L. Holt, Mangum; S. R. Evans, Stilwell; H. E. Yazel, Bartlesville; W. M. Tucker, Sulphur; J. G. Thomas, Alluwee; A. B. Montgomery, Checotah; J. L. Day, Norman; Burton Fain, Frederick; Orange W. Starr, Claremore; William P. Sims, C. D. Blanchly, Drumright; J. V. Athey, Bartlesville; Jackson Broshears, Lawton; R. C. McCreery, Erick.

### MISCELLANEOUS

#### IT'S A FINE LITTLE BLUFF.

The state now has another example of the quackish methods that have been adopted by the osteopaths to advance the commercial interests of their so-called profession. Hard pressed by their chief rivals, the chiropractors, the osteopaths are making a desperate effort to abandon the field of drugless therapy and pose before the public as physicians. The latest manifestation of this desire is a series of paid advertisements that have been appearing in the larger newspapers of the state, demanding that osteopaths be admitted to the army medical service.

Through a shifty use of display type it is made to appear that Dr. Franklin H. Martin, chairman

of the Medical Section of the Council of National Defense, is authority for a pack of lurid mis-statements concerning the training of osteopaths, their education, and the inability of army surgeons to cope with situations at the Front—problems that would be “pie” for the highly scientific and over-educated osteopaths.

Martin, of course, never said anything of the sort. Any man with any knowledge of the low-grade facilities of the osteopathic schools, and the character of most of the practitioners turned out, knows that they are absolutely unfitted for any feature of army service. He would know, further, that this latest “appeal to the public” is merely a clever advertising dodge to exploit their fancy system of rubbing.

Personally, we would like to see the War Department throw down the bars to the whole outfit—Osteopaths, Chiropractors, Christian Science healers, and those who treat cancer by the judicious application of a little rotten apple. It would be rather rough on the troops, but the army would be rendering the civilian public a real service—providing these patriotic healers-for-revenue-only were given sufficiently prominent positions in the front-line trenches.—Ohio Medical Journal.

#### STATE BOARD OF MEDICAL EXAMINERS.

##### Examination, July 10-11, 1917.

Wm. Cook Foshee	University Alabama	1913	Grandfield, Okla.	Passed
Ira Lee Mitchell	American Sc. Osteo.	1917	Carmen, Okla.	Passed
J. Walter Beyer	Jefferson Medical Col.	1905	Tulsa, Okla.	Passed
Herbert V. L. Sapper	Illinois University	1917	Guthrie, Okla.	Passed
Roland Nowlin Holcombe	Washington University	1916	Muskogee, Okla.	Passed
Wm. Miley Rivers	Oklahoma University	1915	Oklahoma City	Passed
Bertha Margolin	Ft. Worth Sc. Medicine	1917	Tulsa, Okla.	Passed
Albert Vincent Fish	American Sc. Osteo.	1917	Sapulpa, Okla.	Passed
Earl Leroy Yeake	Northwestern University	1916	Oklahoma City	Passed
Clifford W. Hammond	American Sc. Osteo.	1917	Grove City, Pa.	Passed
Francis Asbury DeMand	Oklahoma University	1917	Oklahoma City	Passed
Lytle Atherton	Louisville University	1917	Delphos, Kas.	Passed
Leo L. Smith	Baltimore Col. P. & S.	1917	Sapulpa, Okla.	Passed
Wm. G. Husband	Vanderbilt University	1916	Gould, Okla.	Passed
Robt. Elliott Long, (Col)	Meharry Medical Col.	1917	Guthrie, Okla.	Passed
16	American Sc. Osteo.	1917	Ardmore, Okla.	Failed
17	St. Louis Col. P. & S.	1888	Geneseo, Kas.	Failed
Grace Lula Stanford	American Sc. Osteo.	1917	Sapulpa, Okla.	Passed
Chas. Kennard Townsend	Tulane University	1915	Hugo, Okla.	Passed
Andrew Earl Berry	American Sc. Osteo.	1916	Holdenville, Okla.	Passed
21	Third examination		Coleman, Okla.	Failed

#### RECIPROCITY.

				From
Wm. Henry Shipman	Louisville Medical College	1904	Bartlesville, Okla.	Arkansas
Geo. Humphrey Jones	Kansas City University	1913	Jefferson City, Mo.	Missouri
Holmon Bennett Thompson	Arkansas University	1915	Paris, Ark.	Arkansas
Elisha Jay Highfill	Barnes Medical College	1899	Cave Springs, Ark.	Arkansas
Grover Cleveland Moore	Arkansas University	1913	Wagoner, Okla.	Arkansas
Jas. McAfee Buchanan	Washington University	1903	Tulsa, Okla.	Missouri
Clyde Ferdinand Loy	Louisville University	1916	Guthrie, Okla.	Kentucky
Earl Winters Mabry	Nashville University	1907	Tipton, Okla.	Tennessee
Jesse Wright Robbins	St. Louis Col. P. & S.	1908	Steele, Mo.	Missouri
Wm. Glenn Miller	Barnes Medical College	1909	Welch, Okla.	Missouri
Luther Okey Martin	Baltimore University	1899	Parkersburg, W. Va.	W. Virginia
Elmer Clarence Byram	American Medical Col.	1912	Coaltton, Okla.	Missouri
Noble Robert Townsend	Tulane University	1897	Hugo, Okla.	Arkansas
Meyer Saml. Alexander	Memphis Hosp. Med. Col.	1912	Weiner, Ark.	Arkansas
Robert Eugene Breuer	St. Louis University	1907	Newburg, Mo.	Missouri
Bunn Harris	Arkansas University	1913	Jenks, Okla.	Arkansas
Wm. R. Reves	Tennessee University	1892	Alma, Ark.	Arkansas
Edward Price Malone	American Sc. Osteo.	1916	Miami, Okla.	Missouri
Fred Clay Card	American Sc. Osteo.	1911	Tulsa, Okla.	Iowa
Phil. Rogers Russell	American Sc. Osteo.	1916	Tulsa, Okla.	Missouri
Grant Ray Hastings	American Sc. Osteo.	1916	Henryetta, Okla.	Missouri
Reuben Morgan Hargrove	Texas University	1912	Norman, Okla.	Texas
Francis Marion Boyd	Arkansas University	1913	Coweta, Okla.	Arkansas
A. A. Marsteller	Virginia Med. College	1906	Oklahoma City	Virginia
Chas. Magna Driver	Louisville University	1898	Mounds, Okla.	Kentucky

#### RE-REGISTRATION.

Dr. Howell B. Gwin	Dr. Jas. R. Dawson	Dr. W. T. Huddleston	Dr. L. H. Henley
--------------------	--------------------	----------------------	------------------



### TO TEST SMALLER RATIONS.

The war has given a tremendous importance to the whole subject of diet. Food ranks almost with bullets as a vital factor in the great struggle, and efficient utilization of the crops is just as necessary as big harvests. The Carnegie Institute of Boston is to conduct a series of experiments this fall to demonstrate whether men and women cannot maintain their powers on a smaller ration than has hitherto been accepted as the minimum. The Battle Creek Sanitarium has just finished a metabolism experiment lasting forty-five days, with ten subjects. The object was to determine the effect of different diets on the chemical composition of the blood. The results have not yet been tabulated.

### COUNCIL ON PHARMACY AND CHEMISTRY.

During July the following articles have been accepted by the Council on Pharmacy and Chemistry for inclusion with New and Non-official Remedies:

**Neodiarsenol**, The Diarsenol Company, Limited.

**Thiocol-Roche, Syrup Thiocol-Roche, Thiocol-Roche Tablets**, Hoffmann LaRoche Chemical Works.

**Acetylsalicylic Acid**, M. C. W., Mallinckrodt Chemical Works.

**Concentrated Solution Sodium Hypochlorite-Mulford**, H. K. Mulford Company.

### NEW AND NON-OFFICIAL REMEDIES.

(Abridged Report)

**Hay Fever Pollenin Spring-Mulford.** A liquid obtained by extracting the protein of the pollen of rye, timothy, orchard grass, sweet vernal grass, and red top grass and standardizing the solution to a definite protein content. This pollen extract is said to be useful for the prevention and treatment of spring "hay fever." It is supplied in a four syringe package containing increasing doses of pollen protein and in a one syringe package containing the maximum dose. The H. K. Mulford Co., Philadelphia.

**Hay Fever Pollenin Fall-Mulford.** A liquid obtained by extracting the protein of the pollen of ragweed, golden rod and maize and standardizing the extract to a definite protein content. This pollen extract is said to be of value in the prevention and treatment of fall "hay fever." It is supplied in four syringe packages containing increasing doses of pollen protein and in a one syringe package containing the maximum dose. The H. K. Mulford Co., Philadelphia.

**Acetylsalicylic Acid**, M. C. W. A brand of acetylsalicylic acid complying with standards of New and Non-official Remedies. Mallinckrodt Chemical Works, St. Louis (*Journal A. M. A.*, July 21, 1917, p. 199).

### PROPAGANDA FOR REFORM.

**Creosote-Delson and Creofos.** Creosote-Delson is said to be "beechwood creosote from which the irritating and caustic properties are removed by fractional distillation." It is marketed chiefly as Creofos. Creofos is said to be Creosote-Delson in an emulsion containing hypophosphites. The Council on Pharmacy and Chemistry declared Creosote-Delson inadmissible to New and Non-official Remedies because its identity and its difference from, and asserted superiority over the official creosote had not been established. It declared Creofos ineligible because its composition had not been satisfactorily declared, because the therapeutic claims were grossly exaggerated, because the name was non-descriptive of the composition and because the inclusion of hypophosphites was irrational. (*Journal A. M. A.*, July 7, 1917, p. 58.)

**Some Misbranded Nostrums.** The following "patent" medicines have been found misbranded under the federal Food and Drugs Act, chiefly because the therapeutic claims made for them were misleading and false: Quaker Herb Extract, a water-alcohol extract of an emodin-bearing drug. Payne's New Discovery, a water-alcohol solution containing small amounts of baking soda, licorice and extractive matter from a laxative plant drug. Payne's Quick Relief, chiefly turpentine with cayenne papper, resin, camphor and chloroform. Quaker Oil of Balm, containing turpentine, cayenne pepper, chloroform, etc. Cooper's New Discovery, a nostrum of the alcohol tonic type, containing 20 per cent alcohol, some emodin, aloe and a small quantity of oil of sassafras together with reducing sugars. Cooper's Quick Relief, a liniment consisting of cayenne pepper in alcohol (31 per cent) flavored with oil of sassafras. Wilson's Preparation, a powder containing largely starch, acacia and sugar with potassium acetate, calcium hypophosphite and quinin. (*Journal A. M. A.*, July 7, 1917, p. 58-59).

**Venarsen.** William A. Wilson, Kansas City, Mo., writes that he has advised the Intravenous Products Company that after using a great quantity of Venarsen, he can see no more effect on the cases treated than if so much water had been administered, and that this is also the report of Don R. Black, pathologist for Bell Memorial Hospital, University of Kansas. (*Journal A. M. A.*, July 7, 1917, p. 62).

**Some Misbranded Nostrums.** The following "patent" medicines have been found misbranded under the federal Food and Drugs Act. The curative claims made for them were misleading, unwarranted and false: Poland Wine Bitters, a wine to which emodin-bearing and other drugs had been added. Koenig's Nerve Tonic, claimed to be a natural remedy for epileptic fits, etc. Mrs. Edward's Infant Syrup, a "baby killer" containing morphin and alcohol. Root Juice Compound, which was not a root juice. (*Journal A. M. A.*, July 14, 1917, p. 139).

**The Crucial Test of Therapeutic Evidence.** Torald Sollmann points out that if a patient improves after taking a remedy we do not know that he improved on account of the remedy or as a result of the natural course of the disease or for other reasons. In order that adequate allowance may be made for the natural course of the disease, clinical trials of a medicament should be carried out in one of two ways. The first is the statistical method in which alternate patients receive or do not receive the treatment. This method is usually of value only when a large number of cases are available, and even then it is limited or doubtful because it cannot take sufficient account of the individuality of cases. The second method consists in the attempt to distinguish unknown preparations by their effects. In this a patient, or a series of patients, is given the preparation which is to be tested, and another preparation which is inactive, or a preparation the effects of which are to be compared with the first. In either case the investigator does not know when he is giving one or the other, and tries to distinguish them by their effects. If one drug is really of value and superior to the other, this "blind" test will surely bring out such efficiency or superiority. (*Journal A. M. A.*, July 21, 1917, p. 198).

**Tumors in Anilin Workers.** Long exposure appears to result sometimes in the development of tumors of the bladder, with or without the symptoms of chronic anilism. In Germany many such cases have been observed in past years. At the first sign of trouble with urine or bladder in anilin workers, the advisability of careful cystoscopy should be considered. (*Journal A. M. A.*, July 21, 1917, p. 204).

#### WAR MEETING FOR HEALTH OFFICERS.

A war meeting will be held at Washington, D. C., October 17-20, 1917, by the American Public Health Association. This will replace the annual meeting which was to be held at New Orleans December 4 to 7.

The papers and conferences will deal largely with the health problems created by the Great War—the food supply, communicable diseases among soldiers, war and venereal disease, war and the health of the civil population, etc.

President Wilson has said: "It is not an army we must shape and train for war; it is a nation." Go to the Washington meeting; then come back and do your bit!

Washington will be crowded and those interested are urged to reserve hotel accommodations at once. Any hotel or railroad can give a list of Washington hotels.

Preliminary programs will be automatically mailed to all members of the A. P. H. A. about September 15th. Non-members may receive them free by writing to the American Public Health Association, 126 Massachusetts Ave., Boston, Mass.

### NEW BOOKS

#### CATARACT: SENILE, TRAUMATIC AND CONGENITAL.

By W. A. Fisher, M. D., Professor of Ophthalmology, Chicago Eye, Ear, Nose and Throat College. Cloth, 119 pages, published by Chicago Eye, Ear, Nose and Throat College.

A volume in which the Smith-Indian operation for Cataract is minutely described with good illustrations of all the steps and an accurate detail of management. Also giving accurately and concisely the steps of various other methods of care of cataract. Ideal for the physician who comes in contact with many cataracts.

S. E. Mitchell.

#### IMPOTENCY, STERILITY AND ARTIFICIAL IMPREGNATION.

By Frank P. Davis, Ph. B., M. D., Ex-Secretary, Oklahoma State Board of Medical Examiners; Former Superintendent Oklahoma State Institution for Feeble-Minded; Formerly Editor and Publisher, Davis' Magazine of Medicine; Author of various works on subjects pertinent to the doctor. Cloth, 138 pages. Price \$1.25. C. V. Mosby Company, St. Louis.

Dr. Davis has handled this subject, always one of great interest to the student, with care and skill; citing very fully the observations and conclusions of other authors and augmenting the matter with his own opinions. The book is very entertainingly written and will prove of interest to the physician.

#### CLASSIFIED NOTICES

**ESTABLISHED PRACTICE FOR PRICE OF OFFICE EQUIPMENT.** I have a well established practice in a live southern Oklahoma town and wish to specialize. I want some live doctor to take my place for the price of my office outfit. Will sell residence if desired. Address A. B. C., care Journal.

**GOOD OPENING.** A physician is badly needed at Cloud Chief; large territory; no opposition; country practice. Good man can make \$350.00 cash per month. Will gladly furnish information. W. R. Levertton, Hobart, Okla.

## OFFICERS OF COUNTY SOCIETIES

County	President	Secretary
Adair .....	J. Patton, Stilwell	A. J. Sands, Watts
Alfalfa .....	S. B. Growden, Cherokee	L. T. Lancaster, Cherokee
Atoka .....		
Beaver .....		
Beckham .....	J. E. Yarbrough, Erick	K. R. Rone, Elk City
Blaine .....	M. W. Buchanan, Watonga	J. A. Norris, Okeene
Bryan .....	J. H. Shuler, Durant	D. Armstrong, Mead
Caddo .....	W. T. Hawn, Binger	C. R. Hume, Anadarko
Canadian .....	P. F. Herod, El Reno	W. J. Muzzy, El Reno
Cherokee .....	V. L. McPherson, Boswell	E. R. Askew, Hugo
Carter .....	J. C. Best, Ardmore	R. H. Henry, Ardmore
Cleveland .....	J. M. Williams, Norman	Gayfree Ellison, Norman
Cherokee .....	W. B. Blake, Tahlequah	C. A. Peterson, Tahlequah
Custer .....	M. C. Comer, Clinton	S. C. Davis, Clinton
Comanche .....	L. A. Milne, Lawton	G. Pinnell, Lawton
Coal .....	J. B. Clark, Coalgate	A. Cates, Tupelo
Cotton .....	M. T. Clark, Walters	G. O. Webb, Temple
Craig .....	C. S. Neer, Vinita	W. R. Marks, Vinita
Creek .....	C. D. Blachley, Drumright	H. S. Garland, Sapulpa
Dewey .....		
Ellis .....		
Garfield .....	W. L. Kendall, Enid	James H. Hays, Enid
Garvin .....	G. L. Johnson, Pauls Valley	N. H. Lindsey, Pauls Valley
Grady .....	E. L. Dawson, Chickasha	Martha Bledsoe, Chickasha
Grant .....		C. H. Lockwood, Medford
Greer .....	E. M. Poer, Mangum	T. J. Horsley, Mangum
Harmou .....		J. B. Hollis, Hollis
Haskell .....	M. VanMatre, Keota	J. R. Waltrip, Kinta
Hughes .....		
Jackson .....	D. C. Buck, Eldorado	W. H. Rutland, Altus
Jefferson .....	G. C. Wilton, Ryan	J. I. Derr, Waurika
Johnson .....	C. B. Ballard, Mannsville	H. B. Kniseley, Tishomingo
Kay .....		A. S. Risser, Blackwell
Kingfisher .....	C. E. Wagoner, Hennessey	Chas. W. Fisk, Kingfisher
Kiowa .....	Wm. McIlwain, Lonewolf	A. L. Wagoner, Hobart
Latimer .....		E. B. Hamilton, Wilburton
Le Flore .....	J. B. Beckett, Spiro	G. A. Morrison, Poteau
Lincoln .....		A. M. Marshall, Chandler
Logan .....	A. A. West, Guthrie	E. O. Barker, Guthrie
Love .....		
Mayes .....	J. E. Hollingsworth, Strang	W. C. Bryant, Choteau
Major .....		
Marshall .....	A. E. Ballard, Madill	O. E. Wellborn, Kingston
McClain .....	J. W. West, Purcell	O. O. Dawson, Wayne
McCurtain .....	A. S. Graydon, Idabel	C. R. McDonald, Broken Bow
McIntosh .....	N. P. Lee, Checotah	Wm. A. Tolleson, Eufaula
Murray .....	J. A. Adams, Sulphur	W. H. Powell, Sulphur
Muskogee .....	I. B. Oldham, Muskogee	J. G. Noble, Muskogee
Noble .....	Bruce Watson, Perry	T. F. Renfrow, Billings
Nowata .....	J. E. Brookshire, Nowata	J. R. Collins, Nowata
Okfuskee .....	H. A. May, Okemah	J. M. Pemberton, Paden
Oklahoma .....	L. J. Moorman, Oklahoma City	F. B. Sorgatz, Oklahoma City
Okmulgee .....	N. N. Simpson, Henryetta	H. E. Brees, Henryetta
Ottawa .....	R. F. Von Cannon, Miami	G. P. McNaughton, Miami
Osage .....	J. M. Ennis, Pawhuska	Benj. Skinner, Pawhuska
Pawnee .....		E. T. Robinson, Pawnee
Payne .....	E. M. Harris, Cushing	J. B. Murphy, Stillwater
Pittsburg .....	J. O. Grubbs, McAlester	J. C. Johnston, McAlester
Pottawatomie .....	J. H. Scott, Shawnee	G. S. Baxter, Shawnee
Pontotoc .....	C. L. Orr, Ada	M. L. Lewis, Ada
Pushmataha .....		
Rogers .....	W. E. Smith, Collinsville	W. A. Howard, Chelsea
Roger Mills .....	W. S. Wimberly, Hammon	Lee Dorrah, Hammon
Seminole .....		W. L. Knight, Wewoka
Sequoyah .....	S. B. Jones, Sallisaw	T. F. Wood, Sallisaw
Stephens .....	E. B. Thomason, Velma	J. M. Nieweg, Duncan
Texas .....	W. H. Langston, Guymon	R. B. Hays, Guymon
Tulsa .....	A. W. Roth, Tulsa	W. Forest Dutton, Tulsa
Tillman .....	A. J. Hays, Frederick	J. E. Arrington, Frederick
Wagoner .....	F. W. Smith, Wagoner	S. R. Bates, Wagoner
Washita .....	D. W. Bennett, Sentinel	A. S. Neal, Cordell
Washington .....	W. E. Rammel, Bartlesville	J. G. Smith, Bartlesville
Woodward .....	Ralph Workman, Woodward	C. W. Tedrowe, Woodward
Woods .....	Isaac Hunt, Freedom	D. B. Ensor, Hopeton



# THE JOURNAL



## Oklahoma State Medical Association

VOLUME X

MUSKOGEE, OKLA., OCTOBER, 1917

NUMBER 10

### SYPHILIS OF THE NERVOUS SYSTEM.\*

D. W. GRIFFIN, M. D.

Superintendent Central Oklahoma State Hospital, Norman, Oklahoma.

Of the causes operating to produce nervous and mental diseases syphilis stands out as one of the most prominent as well as one of the most dreaded, and yet the lay press shuns the mention of such a monstrous social evil which is all the time striking at the very vitals of society. When the press mentions it at all it is usually in such mild and misleading names as "blood poisoning" or "blood disease." This is syphilis, and so why call it something else. It is a thousand times more dangerous than smallpox or scarlet fever. And, yet, the press almost goes into spasms at the mention of smallpox, yellow fever, etc. If you get yellow fever you either get well or die. But if you get syphilis you may think you are well and wake up forty years hence to find out you are yet diseased, and in the meantime, perhaps, your innocent off-spring also crippled in mind or body or may be worse than dead. And when you pause to think syphilis is causing ten per cent of all the admissions to our hospitals for the insane we will begin to regard it as a factor of no mean importance.

Before considering syphilis and its relationship to insanity let us briefly look for a moment at the disease itself. It is not a disease of recent origin. Over two hundred years before the birth of Christ the Chinese described it in documents which have recently been discovered. Not only did the Chinese describe the difference in the first and second stages, but they also used mercury as a combatant. The Greek and Roman writers tell of a disease which was undoubtedly syphilis. No doubt much of leprosy was syphilis.

Shortly after the return of Columbus a great epidemic of the disease broke out in Eastern Europe, which, no doubt, the sailors carried back with them from the American nation (1492-1500). So severe was this epidemic it is spoken of as the Neopolitan outbreak, by some as "French Disease." So the disease must have existed among the American Indians on this side of the Atlantic long before the sail of Columbus. This is further proven by a number of observers who trace the disease in bones of pre-Columbian times.

Dr. Orton of Philadelphia very recently made an exploratory voyage along the Ohio valley for the very purpose of convincing himself and others of the existence of the disease before Columbus. He found, in spite of the great age of the bones, undisputable evidence of the disease. The same discoveries have also been made in Southern Europe in bones of pre-Columbian ages.

\*Read at Medicine Park, Okla., May 10, 1917.

During the sixteenth century syphilis began to be recognized in its relation to nervous disease. Thus Guainonis (1610) described epileptic attacks due to syphilis. In 1644 Lusitanus described cases of blindness due to syphilitic gumma of the brain, quoting Bolalli a century ahead of him. In 1696 a special treatise on syphilitic pains was written by Blagny. By the end of the seventeenth century a broad view began to be taken relative to syphilis of the nervous system.

In spite of all that has been said and written concerning syphilis, it has been rather slow in giving up its secrets to the modern investigator and it has been only in recent years that the causative organism has been known. Shaudinn reported the finding of the germ in 1905 and two years later Wassermann perfected a test by which we can recognize the presence of syphilis in an individual regardless of whether or not there are any outward signs. And these two discoveries have led us to a wider and more extended knowledge of the disease. Thus within a period of twelve years the light has been made to shine clear in our path-way of the knowledge of this disease.

It is not within the province of this short paper to go into the technique of the Wassermann reaction. For this I will have to refer you to the laboratory, more because I do not believe the average busy practitioner has the time to go into this technique thoroughly enough and equip himself to do this very delicate experiment.

Practically all the early syphilis of the nervous system show a positive Wassermann reaction in the blood. While in the later, or tertiary stages, the percentage of positive Wassermanns may be 50 or even 70 per cent. The Wassermann reaction when applied to the spinal fluid is almost uniformly positive, when you have syphilis of the nervous system; and syphilis without nervous symptoms uniformly negative.

The disease itself is generally divided into two types, i. e., acquired and hereditary, varying in degree of severity; some so slight as to be scarcely noticeable. It is to these two types of the disease I wish more especially to direct your attention. In the acquired type you usually have the characteristic primary sore and then the secondary rash, sore throat, falling hair, etc., then the stage of apparent remission, during which the patient is urged by his physician to religiously live up to systematic treatment, the stage of the greatest danger of neglect when the patient uneducated as he is thinks he is cured and slips out from under the care of his physician to wake up in later life with some form of disease of the nervous system. Maybe in the meantime a family of hereditary syphilitic children of which we will speak later. Even with a Wassermann we cannot every time be sure, but in most cases we can tell our patient if he has latent syphilis.

Hereditary syphilis is that, of course, which occurs in the child of syphilitic parentage. It also varies in degree and severity. Usually if the father has recently acquired the disease the wife may start out with frequent abortions or miscarriages or perhaps give birth to a number of dead infants. Many die soon after birth. A great many crippled, not only mentally but physically. These not only go to fill our eleemosynary and penal institutions, but it has been said by some that thirty-five to fifty per cent of the feeble-minded are the off-springs of syphilitic parents. This same tendency to lie dormant as in the acquired form is true of the hereditary form. The child may go on and develop to the age of fourteen or more and then suddenly develop epilepsy or feeble-mindedness or become a law breaker. Truly it is a disease caused by the sins of the father.

This is a disease usually contracted by immorality, and, of course, is the reason it is rarely ever discussed outside the medical circles. And it is right here I believe our educational system fails in one important place. I do not pretend to say how the danger of this disease should be carried to the minds of our children but I do say something ought to be done to let them know about a disease which is responsible alone for ten per cent of the admissions to our hospitals for the insane, say nothing of the feeble-minded, criminals, etc., it creates. Most of us

have sons and daughters going to school acquiring the knowledge of typhoid, scarlet fever, smallpox and other infectious and contagious diseases, but they absolutely learn nothing of that greatest thief of all, "syphilis." I believe it is one of the greatest destroyers of mankind we have to deal with, and it will remain so until we open the closed door and let the sunshine of intelligence in.

As has been said, this disease is nearly always contracted through the channel of immorality, and I believe that our sons ought to be taught the danger of the first night out. The first immoral act may be the cause of the dreaded disease, "paresis."

When we come to consider the types of insanity caused by syphilis we find that there are three fairly distinct types, and it is these three I will take the time to discuss.

**General Paresis** is general paralysis of the insane. As has been said, there is but little doubt in the correctness of the old statement, "no syphilis, no paresis." It has been proven that the Wassermann reaction of the spinal fluid is positive in from 95 to 100 per cent of all cases of general paralysis. And what is true of the spinal fluid is almost equally so of the blood. Yet Wassermann reaction is true in leprosy, and may be so in scarlet fever. So that with data of this kind there yet might be left a doubt whether we were dealing with some other kind of disease. It remained for Moore and Noguchi in 1913 to demonstrate the *treponema pallidum*—the causative organism of syphilis in stained microscopic sections of the brains of paretics in 24 per cent of their series. Since 1913 several observers, both at home and abroad, have been able to bring about the same results as that of Moore and Noguchi. So, therefore, we must know that syphilis is responsible for all cases of general paresis.

In the typical cases of general paresis we find it following in from five to fifteen and even forty years after the initial attack; long after the unfortunate had forgotten all about his syphilis. His friends begin to notice his eccentricities, change in habits, change in relation to family and friends, loss of memory, loss of ability to concentrate the mind, no longer alert and keen as he has been normally, changes in conduct. Some appear as mildly intoxicated, sometimes even fall asleep while at work, gradual impoverishment of ideas; loss of judgment goes on; the patient by this time may make the most absurd trades or contracts.

I have known of cases getting away with their entire estate, leaving their families in abject poverty before they were finally taken under control. The delusions are usually fantastic, senseless, sometimes being agitated and excited beyond all bounds. They think in millions, billions, quadrillions, etc., sometimes quite frequently imagine themselves kings, presidents, priests, Christ, God and super-God. They have diamonds, race horses, etc. I have one now who imagines he owns gold trains to transport his friends from one city to another.

The character alters. He may become the vilest human being to be thought of. The patient, perhaps formerly a model of morality, suddenly changes to the lowest sexual misdemeanors, criminal acts may be committed as the shooting of his wife or some friend. Remissions may occur, but neurological and serological examinations will reveal symptoms and later the disease will return in all its fury to death.

**Cerebrospinal Syphilis** is of much less importance because the symptoms are usually more frequently physical than mental, maybe the loss of a group of muscles or the loss of an eye, etc.

**Cerebral Syphilitic Endarteritis** is as the name implies, a disease primarily of the end arteries of the cortex, which cause a blocking up of the end arteries, thus causing partial or complete starvation of the parts of the brain involved.

Here I would like to illustrate by giving you a brief history of a case I once had. This was a case of a young business man who had arrived at the age of forty years, had been active and prosperous in business. First he began to complain of



constant headache, vomiting, this came on in a year or so after the primary sore, later a partial paralysis, then began the error of judgment, loss of memory, loss of speech, loss of eye-sight and, of course, loss of position. He was admitted to our care and rapidly became a hopeless invalid, worse than dead.

I have very briefly run over the three most usual types of the disease as we meet it in hospital practice, but have said nothing of the hundreds of other diseases directly attributable to syphilis, both mental and physical, say nothing of the awful misery of the thousands of crippled and maimed children born into the world from syphilitic parentage.

I must not leave this subject without giving you a little history of the economic loss due to syphilis. Now for instance I started out by saying statistics showed that ten per cent of the cases of insanity committed to the hospitals of this country are caused by syphilis. Now let us get home on this subject and see what it is doing for our economic welfare in Oklahoma. I will give you the statistics as shown by one of our hospitals.

Last year at Norman we received 677 patients and had to begin with a thousand. Now ten per cent of 677 is sixty-seven (plus). Now then, these patients cost the state at the rate of two hundred dollars per capita, that would mean if these sixty-seven patients lived for a year in the hospital, it would cost the state to maintain them \$13,400 per year. Suppose also that ten per cent of that thousand, or we will make it safe and say, six per cent of that permanent thousand were syphilitic, that would give us sixty more, and that at two hundred dollars per year would mean \$12,000 additional per year. And if this same holds true with the other two institutions in the state, see what it is costing us. We have in all about 2300 insane in this state at the present time, and at the very low percentage of six per cent would make syphilis cost us annually \$27,000. I know I would be more nearly correct to estimate it at ten per cent. If I did, it would reach the enormous sum of \$46,000. Statistics throughout the United States give from eight to ten per cent of all admissions due to syphilis, so you see I have given you a low estimate for Oklahoma.

Now again our lawyer friend will tell us if a man at middle age is run over by a railroad train and killed the loss is equal to \$5,000, and if so, that two hundred paralytics we stand a loss to the state of one million dollars which would pretty nearly build our capitol.

Then again, with a dose of salvarsan at the normal price of \$5.00 per dose, and it is estimated that ten doses may have some beneficial results in treatment of cases, this would mean \$10,000.

As I have stated, syphilis does not only affect the individual alone, but it is visited upon his children to the third and fourth generation.

#### References:

- Donald Gregg, M. D., Boston.
- Samuel T. Orton, A. M., M. D., Philadelphia.
- Archibald Church, M. D., Chicago.
- Capt. Lloyd L. Smith, M. C. U. S., Army.
- J. Victor Haberman, A. B., M. D., D. M., Berlin.
- White and Jelliffe, New York and Washington, D. C.

### ABSORBABLE METAL CLIPS FOR LIGATURES.

E. Wyllys Andrews, Chicago (*Journal, A. M. A.*, July 28, 1917), points out the advantage of quickness in applying metal clips for ligatures and sutures closing deep layers and deep vessels, and answers the objections that have been offered to the method. The objection of leaving foreign bodies behind is the occasion for the article, which refers to his efforts to find an absorbable metal or alloy of metals which will ultimately disappear in buried wounds. Pure magnesium is an ideal absorbable metal, but is brittle and weak in small pieces, and Andrews gives an account of his laboratory research to find the proper metal or alloy. He has tried mixtures of aluminum, magnesium, cadmium and zinc, but thus far his efforts to alloy magnesium have not been quite successful, but other experiments are in progress which he hopes will be more so.

## HEREDITARY SYPHILIS.\*

W. L. KENDALL, M. D., Enid, Okla.

**Hereditary Syphilis.** Lues may be transmitted from the father or mother, or from both, and when thus transmitted is called inherited syphilis. In many cases the exanthematic manifestations may be wanting, but later specific or dystrophic lesions may show themselves. The view that inherited syphilis is at first superficial and later becomes deep and visceral is false, since the whole organism is involved from very early life.

Syphilis hereditaria is not exceptional, it may occur about the eighth or twelfth year, or even earlier, and is frequently encountered at all periods up to the thirteenth year of life and perhaps later. We have found in our own results that 30 per cent of the children in the Oklahoma institution for feeble minded are hereditary syphilitic.

The effects of syphilis are so appalling and its cure so difficult that every effort should be made to protect the public from its ravages. It should be made a notifiable disease, so that its exact prevalence may be ascertained. A few states already require physicians to report cases of this disease. If the names of patients are withheld, no valid objection can be raised against such a law. All hospitals receiving aid from a state or city should be made to receive and care for such cases, and no person having this disease should be permitted to marry or engage in any occupation in which he may convey the disease to others. Those who are suffering from it should be kept under surveillance and required to continue treatment until cured. Full information should be given the public by means of lectures, pamphlets, and health bulletins regarding the dangers of syphilis, so that everyone may understand the necessity of safeguarding himself. No one objects to precautions to prevent the spread of smallpox. The suppression of syphilis is of even greater importance, and if the people were aware of its nature they would insist upon the enforcement of proper precautions to accomplish this purpose. Modern tests should be made by insurance companies to prove the absence of syphilis before writing policies, and Government employees should be required to prove themselves free from this disease before appointment. If a young man could be made to understand that his health and prospects in life depend upon his keeping himself free from venereal disease, he would not run the risk of acquiring it.

In the campaign against syphilis, already well advanced in some parts of the United States, the role of the medical school should be one of the greatest importance. Not only are thousands of cases treated in their clinics and dispensaries, but on their teaching depends the ability of their graduates, who in turn should play an active part in eradicating this disease.

While much has been written on syphilis during the past few years, those of us who have much to do with this problem realize the ignorance of the subject is not limited by any means to the laity, and that a repetition of statistics showing its magnitude may well be tolerated.

Osler has said that syphilis ranks next to tuberculosis, pneumonia and cancer from the standard of mortality. Fisher in 1913 estimated that 18 per cent of the people of the United States are syphilitic. Church estimates that there are twenty million people syphilitic in the United States.

**Treatment.** It is the opinion of those who have had the greatest experience in the treatment of syphilis that mercury and iodide of potash should be used to supplement the treatment with salvarsan and neosalvarsan, and vice versa.

Where possible the treatment of hereditary syphilis should be started before the birth of the child. Mercurial inunctions and small intramuscular injections

\*Read at Medicine Park, Okla., May 10, 1917.

of neosalvarsan comprise the best measures to combat hereditary syphilis. The injections of neosalvarsan should be given every one to two weeks, according to the absorption. All treatment should be continued until the luetic manifestations disappear and remain away, and the blood test remains negative.

Syphilis, from a sociologic, economic and mortality standpoint, is the greatest problem before our profession. Physicians have the opportunity to take the initiative in stamping out this disease and should not wait for outside organizations to force it on them. Medical schools have a double opportunity to do their share; first, by adequately treating the patients coming to their dispensaries; second, by furnishing such instruction to their students that they also may be depended on to treat syphilis correctly. The majority of schools have competent men in charge of this work, but results in many cases are not obtained on account of the school not furnishing sufficient assistance and adequate equipment. The prevalence of the late manifestations of syphilis is obvious proof that the profession has not treated syphilis adequately; there is no excuse for a continuance of these methods.

### OCULAR MANIFESTATIONS OF SYPHILIS.\*

J. H. BARNES, M. D., Enid, Okla.

Ocular manifestations of syphilis is one very important point in making the diagnosis of secondary or tertiary syphilis. If we fully understand syphilis of the eye, we are many times able to make a definite diagnosis for the internist or the syphilographer, when other symptoms are more obscure. It is important from another light. The eye being the most important organ of the body, it behoves us to be able to make an early diagnosis of syphilis of this organ, for in a short time syphilis may destroy all the sight. It is prone to attack the most vital parts of the organ of sight and when it is once destroyed it can never be restored.

We will try to bring to your minds some of the most vital points of the structures of the eye that are most often diseased by syphilis. The ocular muscles are paralyzed by syphilis more often than any other cause. The lesion may be in the cortex at the very beginning of the muscle center or it may be at the base of the brain in the nerve center or in the course of the nerve or in the muscle itself. It is very interesting to locate these lesions by the test of the muscles, and other symptoms of the pupil reaction, etc., but it will be too intricate for a paper like this.

**The Symptoms** are: (1) limitation of movement; (2) false orientation; (3) diplopia; (4) vertigo; (5) head tilting.

Limitation of movement can be found very easily by having patient to follow the finger in the four fields of vision and watching the excursion of each eye. The eyes will move together in all directions except where the paralyzed muscle is to be brought into action.

False orientation is shown by the patient being unable to locate an object correctly with the paralyzed eye. Neither is he able to walk straight with the paralyzed eye.

Diplopia is the most troublesome symptom. The patient is continually annoyed when looking toward the paralyzed muscle. By means of this double vision and the position of the two images we are able to determine the muscle that is paralyzed as well as the degree of paralysis.

Vertigo also annoys the patient to such a degree at times that he is unable to perform his daily work. The double images and the false position of objects when eyes are turned toward the paralyzed muscle excites a false movement of the objects of all the outside world. This gives the patient a false impression of his position. It sometimes excites vomiting. This can only be overcome by closing

\*Read at Medicine Park, Okla., May 10, 1917.



the eye that is paralyzed. The head is inclined to tilt to the side of the paralyzed muscle to avoid the vertigo and the double vision.

The cornea is often diseased by the spirochete *pallida*. The one that is most interesting is interstitial keratitis which is nearly all the time hereditary, and other facial symptoms occur to aid in the diagnosis of syphilitic keratitis; such as, a flat bridge of the nose bordering on epicanthius. The forehead has protruding eminences over each eye. The teeth are notched and ill formed and many other external signs that are well known. It is a disease of youth occurring between sixth and twentieth years of age. Females are more often attacked. It runs a chronic course from six to eighteen months. It begins by small deposits in the substance of the cornea, giving the cornea a dull hazy condition. This deposit seldom breaks down and ulcerates, but may become organized and form a permanent opacity. If treated properly the deposits are mostly absorbed and vision retained slightly impaired. There are very fine blood vessels extending from the edge of the cornea to these deposits. They can be seen after the deposits have been absorbed as fine threads in the parenchyma of the cornea.

The symptoms are slight signs of inflammation, severe photophobia and lachrymation. There is more or less inflammation of the iris and ciliary body. Both eyes are generally attacked nearly at the same time. If the diagnosis is made early, the treatment is very satisfactory if pushed to the limit of tolerance. Mercury is the sheet anchor for treatment of syphilis. Inunctions is the best way to administer it. Arsenic in some form that is used in other diseased organs has not proven of much value in treatment of interstitial keratitis. Potassium iodide is of untold value in the treatment of interstitial keratitis. It seems to aid the mercury, and the deposits in the cornea disappear more rapidly and completely. Cornea becomes more clear. It should be given in large doses up to 600 to 900 grains a day even to a child seven to ten years old. Increase the dose rapidly, two grains each dose, three times a day. Dionin in 2 to 5 per cent solution should be used in eye one to two times a day. This aids the absorptions and limits the disease as well as prevents its extension to the iris and ciliary body.

Syphilitic iritis is not nearly so common as other causes of iritis; though our text books tell us that it causes a great majority of the cases of iritis. Since we know more about focal infection we are able to designate the causes that at one time we attributed to syphilis by the therapeutic diagnosis.

All cases of iritis will yield to mercury and iodides. The Wassermann is the only sure test we have. Sometimes we are able to see the small nodules of a yellowish-red color in the margin of the iris. Then we can say it is syphilitic. These nodules are not always present, then it is hard to distinguish from other forms of iritis.

Iritis begins suddenly with redness of eye, worse around cornea, getting less as it gets farther from the cornea. There is excessive lachrymation but no mucus or pus. Lids do not adhere together when sleeping. Pain begins early in eye and radiates to temples and head. It is always worse soon after retiring. Light is painful to the eye, especially artificial light. The iris is discolored, looks milky or muddy, not clear and glistening as compared with sound eyes.

The pupil is contracted and does not readily respond to light. The pupil does not dilate readily with atropine, when it does it is often irregular, due to adhesions to capsule of lense (posterior synechia).

The ciliary body is often involved in severe cases of iritis, then the aqueous and vitreous becomes cloudy. There are small specks or black spots on posterior surface of the cornea known as punctate keratitis. These are arranged in cone shape with base below, like an inverted funnel. The pain at ciliary region of eyeball is more marked when pressure is made in this region.

The treatment should begin early and be pushed rapidly. Salvarsan helps in these cases. Then mercury inunctions and iodides in large doses as in keratitis. The most important thing in the treatment is atropine to dilate the pupil, for by

the adhesions to the lense (seclusio pupillae) and then the products of inflammation thrown out in the pupil, sight is partially or totally destroyed.

If any part of the iris remains adhered to the lense, recurrent iritis is most sure to occur. If the iris is adhered all around the pupil, the circulation in the aqueous is bad and we will soon have a hardening of the eye ball (glaucoma) and the sight gradually destroyed. If the pupil fills up with a deposit, as it is most sure to do if it is not dilated, we will have the same thing to occur, loss of vision at once and later loss of eye-ball from glaucoma.

Atropine with the aid of dionin solution 5 per cent to 10 per cent must be used early and often till the pupil is wide open and all adhesions broken loose. Dionin in powder form put in eye in obstinate cases will gradually help to dilate pupil. Hot applications and sodium salicylate in 15 to 20 grain doses will help the pain, and favor absorption.

When the choroid is affected by syphilis we have a blurring or clouding of the vision which rapidly grows worse. The patients complain of seeing spots floating like a flock of birds or maybe only a few flocculent spots at times getting before the sight and covering the object looked at.

There is little or no pain unless the retina is involved, which often it is a part of the inflammation, then we have photophobia.

The vitreous is cloudy and often obscures the fundus. There are often floating bodies which can be seen with the ophthalmoscope. If the fundus can be seen, we most often see exudates in the choroid of a yellowish color, outline indistinct, all over the fundus. The blood vessels are seen to run over these spots. When these spots disappear it leaves a white spot or atrophy of choroid showing the white sclera, vessels still running over the irregular shaped spots.

The disturbance of the vitreous and retina causes a failing of vision. Vision may be almost totally lost during the attack, but is partially restored after treatment, leaving blind spots (scotoma) in the field of vision. During the attack the images are often distorted, lines are bent and irregular, due to a displacement of the retina by the exudate. Irritation of the retina are manifest by sensation of light, sparks and balls of fire, etc. The treatment is the same as iritis except the dionin.

The retina is a victim to syphilis. There is one variety of choroiditis when the retina is also involved with the choroid. Diffused choroiditis, known as chorio-retinitis. This is shown in the fundus, when the pupil is well dilated, as small punctate haziness in the vitreous and small exudates in the macula region. Atrophy follows this disease and small irregular black spots in the retina, especially in the periphery resembling retinitis pigmentosa.

There is a circumscribed form, seen as a white exudate in the macula region or near a large vessel. The vision is greatly disturbed it is near the macula. The treatment is mercury and iodides. Abstain from all work and protect the eye from the light by dark glasses.

Syphilis often attacks the optic nerve in two ways, one by a lesion of the nerve as a gumma, and secondly by inflammation of the nerve. A lesion of the nerve does not show itself by any outward sign in the eye nor by any lesion being seen in the eye, the fundus appearing perfectly normal.

The diagnosis is made by the field of vision which is some form of hemiopia. By the peculiar crossing of the nerve fiber in the optic chiasm we are able to locate the lesion. When the lesion is behind the chiasm we have right or left field of vision absent. The field cut off is opposite to the optic tract that is involved. If the lesion is in the chiasm we have temporal hemiopia. If the nerve is involved in front of the chiasm we have complete blindness in one eye. These lesions are quite common and are usually due to syphilis.

Inflammations of the nerve are divided into two forms: intra-ocular and retro-bulbar neuritis. The intra-ocular is called papillitis or choked disk. It is

seen with the ophthalmoscope as a swollen nerve head, the outline of which is obscured by an exudate of white deposit obscuring many of the vessels in places. The veins are tortuous and much larger than normal. The arteries not so much changed. There are often hemorrhagic spots due to a rupture of the tortuous veins. The sight is greatly diminished. The field is contracted and the blind spot is greatly enlarged. The pupil is dilated and inactive to light and accommodation to the degree of blindness. This is the only outward sign of choked disk. This form of optic neuritis is due to intra-ocular pressure caused by the cerebrospinal fluid being forced down the nerve sheath to the cribiform lamina, which causes a compression of the vessels, first an edema and then an inflammation of the nerve with the above symptoms. The treatment of this condition besides the regular anti-syphilitic medication is decompression and tapping of the spinal canal. This should be done early in the edematous stage or the sight will be totally destroyed. The outcome of these delayed cases is that grave atrophy usually follows, which is shown by the contraction of the field of vision and the loss of color perception.

Retro-bulbar neuritis is a toxic form of neuritis and is not well shown in the fundus. There are no outward signs of this disease, so the diagnosis must be made by the symptoms. The sight is first affected, very often very suddenly. The central vision being most affected. There is a loss of red and green color in the central field. White is seen normally at first, it is contracted in those cases that do not yield to treatment.

If the diagnosis is made early in the acute stage, and treatment administered, the prognosis is good without the loss of scarcely any sight.

Atrophy of the optic nerve is in two forms, primary and secondary; the latter is due to the inflammatory conditions as we have described before, such as choked disc and toxic conditions of the nerve. The first or primary atrophy is nearly always due to syphilis and is found in the early stages and one of the first symptoms of locomotor ataxia, tabes, symptoms. The loss of sight is so gradual that we can scarcely detect it in the disease. The nerve head looks pale white, gets whiter, the outline of the nerve head is very distinct and well defined and slightly excavated. The blood vessels become smaller and fewer in number.

The field of vision is contracted for all colors alike. The pupil is small and does not react to light, called Argyll-Robertson pupil. There is one other symptom discovered by Westfall, it is the absence of the patellar reflex. The prognosis is bad, treatment avails but little. Salvarsan should be given, especially intraspinal in all these cases. We have not the space nor the time to give a complete outline of ocular syphilis, but this should be enough to stimulate an interest in the study and diagnosis of ocular syphilis. Many diagnoses of the internist are made clear and conclusive by understanding clearly these few remarks on ocular syphilis.

### INTUBATION OF THE LARYNX.

H. J. Cartin, Johnston, Pa. (*Journal A. M. A.*, Aug. 11, 1917), gives an analysis of 350 cases of laryngeal intubation occurring in his private practice in a region largely inhabited by foreigners living under unsanitary conditions and inclined to conceal disease through fear of quarantine, and where naturally epidemics of diphtheria are common. The analysis is rather elaborate, but his conclusions from it are given as follows: "1. No patient needing intubation should be denied the chance to live because of lack of hospital facilities. 2. Overcrowding of homes, unhygienic surrounding, concealment of disease, and exposure to contagion are responsible for the epidemics. 3. Lack of trained assistants need not deter one from operating. 4. The use of a tube larger than that indicated for a given age gives better results. 5. Early intubation with large doses of anti-toxin reduces the mortality. 6. Wearing the tube five days resulted in fewer reintubations. 7. It appears that special diet and methods of feeding are unnecessary. 8. Reintubation does not seem to affect phonation permanently."



## AN EARLY TREATMENT OF SYPHILIS, WITH REMARKS ON ITS PREVENTION AND CURE.\*

R. T. EDWARDS, Oklahoma City, Oklahoma.

The early treatment of syphilis naturally takes the most prominent place in the entire management of the case for the reason that, first, it is of great importance to get control of the attack as early as possible to protect your patient from publicity, second, that you may give him the utmost advantage towards a speedy cure, third, that you may protect others against him.

With this in view, it is necessary to make as early a diagnosis as is possible, always bearing in mind that your diagnosis must be a positive one. We know that the most innocent and inoffensive appearing abrasion may contain the syphilitic infection. We should therefore be guarded in diagnosing any lesion of the skin or mucus surface without determining its nature. In this respect I recall a case that has its bearing on this point. The case was one of another venereal condition that had been under my care for some weeks. He was called out of town for a few days, and upon his return I noticed a slight hair scratch well back upon the body of the penis. He finally acknowledged exposure, but had not noticed the scratch which disappeared the next day. I cautioned him about the possibility of infection and kept him under daily observation, when six weeks later he developed a very obstinate case of syphilis. There was at no time any appearance of chancre. There was only one slight superficial tear in the tissues. Where there can be obtained a secretion from the ulceration and under microscopic examination, the spirochete found, the question of diagnosis is of course complete. But where no such procedure is possible, it is always best to confine treatment to the local manifestation, and await the appearance of the secondary lesion. This time being limited is of little importance in the ultimate result of the case.

The reason I dwell upon this old routine method of awaiting the appearance of the secondary eruption is that today, as much as yesterday, so very many cases come under observation that are confusing to both patient and doctor as the result of beginning treatment before diagnosis was positive. In my mind guessing at the diagnosis very often obviates the possibility of carrying a case to its conclusion and cure, principally because of a doubt in the minds of all concerned.

We know that oftentimes the Wassermann is unsatisfactory under these conditions.

The treatment of the initial lesion of syphilis embraces many methods and numerous drugs, but I shall mention but one that I almost universally use, i. e., first, cleansing the parts and keeping them clean, removing constrictions where they exist and a thorough application of some of the stronger silver salts at once. I do not as a rule use but one application of silver, but stimulate granulation with a mild germicide and keep in contact some bland astringent ointment, my purpose being to take up secretion and where ulcer is exposed, prevent adherence of clothing and the formation of scab.

The diagnosis of syphilis having been made, it is imperative to begin treatment at once that we may get control of the symptoms that are so humiliating to the patient. The sanitary aspects of the case here demand careful consideration. The transmission of the disease by the patient to others must be carefully guarded against. Clean clothing, cleanly person, teeth, scalp, nails, in fact clean everything. If cleanliness is necessary in spiritual life, it is doubly true in the successful treatment of syphilis. The teeth of the patient must receive careful attention throughout the life of the case. All points of infection must be cleared. The teeth should be thoroughly cleansed twice daily, and I require my patients to visit their dentist regularly every three months for cleansing and repair. I feel that I cannot lay too much stress upon the care of the teeth in syphilis. Equally in importance is the care of the tonsils and nasal cavities. Infected tonsils should

---

\*Read at Medicine Park, Oklahoma, May 10, 1917.

invariably be removed, and obstructions or infections of the nasal passages cleared up. Proper care of the eyes is also demanded, as is the removal of hemorrhoids if they exist. In fact a rigid hygienic supervision of the entire body is both necessary and will greatly expedite the cure of the disease.

In considering the medicinal treatment, I shall dwell but a moment upon salvarsan, and its many derivatives. To quote that illustrious man from whom this great adjunct to the treatment of syphilis sprung seems to be all that I can add to the inexhaustible fund of words written and said regarding salvarsan. The world owes a great debt to Prof. Ehrlich, both for his wonderful discovery and modesty with which he declaimed its virtues. He has said that "I believe that salvarsan, properly administered to those cases where it can be borne with safety, will benefit nearly every case of syphilis." The truth of this concise statement is proven by the results in thousands of cases that salvarsan is the most valuable adjunct in the treatment of syphilis. Its greatest usefulness is perhaps the rapidity with which we may gain control of obstinate cases where it would require weeks or months to accomplish the same results by the older methods. For the cure of syphilis, we must of necessity look to continued use of some of the reliable preparations of mercury, maintained at the point of tolerance for periods of months to be repeated after short intervals of rest over a period of from two to four years. The form and method of giving mercury is largely a matter of choice and experience, though I am of the opinion that the most satisfactory means of finding the point of tolerance is mercury by the mouth with the absolute fixed regulation of diet, bathing, and regular course of weighing patient on reliable scales. The tolerance can generally be acquired in from one to three months. That point should of course be maintained with due regard to possibility of its change, which condition may occur and does, I believe, happen in about one case in three.

Of the preparations of mercury most in vogue we may mention the bichloride, the proto-iodide, the cyanide in aqueous solution, the salicylate used hypodermically and other preparations of mercury used intra-venously, the inunctions of mercury and the administration by mouth, all of these remedies have their devotees. The most universally used form of mercury by the mouth is perhaps the proto-iodide. The objection to this form is that it changes its chemical composition when exposed to moisture, and becomes more of an irritant to the mucus membrane. This objection can be overcome by using a specially prepared pill with charcoal and aromatics made by Upjohn.

The care of the digestive tract is always an important factor in the treatment of early syphilis. The mucous membrane must at all times be guarded against over irritation or ulceration. Constipation is sometimes a very serious complication, and diarrhea must be early controlled, but with strict adherence to diet, bathing and care that the point of tolerance is maintained, not exceeded, with the suggestion regarding teeth complied with, little annoyance need be expected, and the case progress favorably into the latter stages of which this paper does not treat.

Without which no case of syphilis may be successfully treated, are the following simple rules of procedure.

First, positive diagnosis; second, hygienic control of the case throughout its life; third, maintenance of treatment at point of tolerance; fourth, the preparation of mercury best suited to given case, continued to termination.

Before closing this paper, I would like to call your attention to a few thoughts that have occurred to me regarding the treatment and prevention of syphilis. As syphilis is perhaps the best known disease in the calendar, it is also the most difficult one to control as is so clearly brought out in the able article by Dr. Wm. A. Pussey of Chicago, on "The Sanitary Attack Upon Syphilis," read before the American Social Hygienic Association at St. Louis, November, 1916, and published in the January issue of *The American Journal of Syphilis*. Dr. Pussey

very clearly states that owing to the fact that syphilis is a social as well as a venereal disease, makes it a very difficult problem to solve from the standpoint of its cure and prevention. As education universally clears up all human problems, so we must depend largely upon that factor in eliminating or at least controlling the spread of the vicious malady.

The method of educating the masses to a clear understanding of the grief to many generations to come by the spread of syphilis, due in a great measure to the secrecy surrounding the attack, is an important factor to be considered by both the medical profession and educators in general. As all education must be founded upon fact, so it follows that strict adherence to the truth must be practiced in educating the public, of the process of syphilis, its complications and danger to both the individual and to succeeding generations. The laws heretofore enacted by both state and municipalities for the control of syphilis have proven of little or no avail. So we have constantly before us the same old problem—one that it is our duty to solve, of a means of the prevention and cure of syphilis.

In discussing this phase of the treatment of syphilis with the chairman of this section and a few of my associates, I submitted the following line of thought, and at their earnest solicitation I now submit them to you.

Is it not possible by a plan of education to enlighten the public about the facts of syphilis, its course, termination and danger; as well as the possibility of its control and cure? Following this first step, encourage the enactment of laws requiring the compulsory treatment of syphilis in the indigent and public prostitutes. In this respect, I again refer to Dr. Pussey's article and quote:

"To obtain the full benefit of a therapeutic attack upon syphilis would require that the plan be applied on a very large scale, and that free treatment be provided by the state as a sanitary measure. In spite of the extent of syphilis, such an undertaking would not be of colossal proportions. The early syphilitic, the one who, for the protection of the public, needs treatment, is not bedridden; he is usually not even ill or estopped from his occupation. Adequate treatment of syphilis in its early course can be carried out upon ambulant patients. This measure would not, therefore, require the provision of large hospital facilities for syphilistics. It would require an extensive system of dispensaries to which access is free, easy, and unquestioned. This organized work for syphilis must be offered to the syphilitic in a way that he will accept it. It is this fact that would make compulsory notification, in the present extent of the disease, so great an obstacle to the sanitary attack upon it.

"Before we can hope to get the state to make a general attempt at the treatment of syphilis, it will be necessary for the institutions we now have to develop as fully as possible this plan of attack upon syphilis, and establish by practical experience its value. To that end efforts should be made now to convince existing hospitals and dispensaries of their responsibility to the public in this respect, and to influence them to make adequate provisions for the treatment of syphilis. Municipalities also should have brought home to them the importance of establishing facilities for the adequate treatment of syphilis. Emphasis is placed upon adequate provision because adequate provisions are what is now lacking. Provisions of a certain sort now exist to a considerable extent—to an extent quite sufficient to furnish the necessary object lesson in the value of the sanitary attack we are now discussing, if only these existing provisions were adequate.

"What the essential conditions are for adequate service of this sort have been very ably discussed by Dr. Michael M. Davis, the enlightened director of the Boston Dispensary. The essentials in Davis' opinion, with which I entirely agree, are: skilled medical service, with salaried medical men; adequate equipment for diagnosis and treatment; a well organized clinic, which provides a follow-up system for patients and social service; provision for evening clinics; and an organization which will not only treat the destitute, but will provide also for those who are able to pay small fees. These conditions are not Utopian. They are not exces-



sively expensive. Indeed, in most respects they are not above the standards which are now expected of well organized hospitals and dispensaries.

"The first step in this plan is to provide easy and satisfactory opportunities for treatment for the syphilitic who voluntarily seeks it. We have sufficient experience now to say that most syphilitics will avail themselves of the opportunity for treatment, when they know where good treatment can be obtained and where knowledge of their condition will not become public property. The next step would be to make an effort to see that treatment is given to the careless and vicious who would not voluntarily seek it. Many of these would be discovered among those who made only one or two dispensary visits. They could thus be spotted for the enforcement of any enactments that were looking to the compulsory treatment of such cases. Prostitutes as a rule avail themselves of efficient treatment if they only know where to find it. In the case of unquestionable prostitutes, I would be glad to see such laws compelling them to undergo treatment during the active period of the disease.

"Dispensaries such as we are now considering would be intended only for the destitute, and for those of small means; but as a matter of fact well equipped and efficiently conducted institutions of this sort would appeal to a very considerable part of the community; and they would compel the physicians to see to it that their handling of syphilis equalled in efficiency that of the dispensaries. The efficient handling of early syphilis now is a special job. In the hands of the average practitioner it cannot be done as well as it would be done in a well organized dispensary, and dispensaries of this sort would do much to raise the standard of treatment of syphilis in private practice. They would thus help to relieve the situation to a considerable extent even in the supposedly more fortunate classes which they would not directly reach.

"One of the collateral benefits which would accrue from a well organized therapeutic attack upon syphilis would be the educational advantage which the emphasis thus thrown upon the disease would have in instructing both the public and the medical profession. The public would quickly learn from it the importance of early diagnosis and treatment of syphilis. It would remind the physician, too, not only of the importance of precision in diagnosis and of early treatment, but of the fact that the public realized this. Such organized facilities also would perform a very valuable function in furnishing to medical students and physicians proper opportunities for the study of syphilis."

It seems to me that this plan is a most practical one and worth serious consideration by all municipal officers to be seconded by medical men in general. Without dwelling too long, I beg to submit the following thoughts along the line of preventative syphilis, with the report of but a few examinations of the blood of cases having been under treatment of syphilis.

I am confident that it is possible to make laws compelling prostitutes with syphilis to take treatment under the supervision of competent physicians appointed by the state or city. Would it not then be practical to require them to undergo prophylactic treatment to immunize them against syphilis, conditionally that the treatment is feasible, is moderate in price, does not cause physical suffering and does not have to be given too frequently, so much so as to require too much of a sacrifice of time.

We know that within a reasonable period, we immunize a patient against the transmission of syphilis. The question appears to be, can we not immunize one against contraction of the disease and if so for how long a period. To this end we have made the following examinations of blood of syphilitic cases, these cases having received treatment for different periods of time to ascertain the presence in the blood of arsenic and mercury.

**Case No. 1—E.** Received secondary syphilitic, treated by mouth for 9 months. Later received intravenous salvarsan over a period of 6 months, 9 injections in all. Last injection made February 11, 1917. Negative Wassermann April 15, 1917,

sample of blood taken April 30, 1917, negative results. The fact that no arsenic was found in this patient's blood 2-1-2 months after the last intravenous injection (he previously had received eight other injections of salvarsan covering a period of approximately 6 months) would in addition to establishing the fact of a speedy elimination seem to preclude the use of salvarsan as an immunizing agent.

**Case No. 2—J.** Has had syphilis 3 years. Intermediate treatment for 6 months, case came under my care February, 1916, treatment consisted of proto-iodide mercury at the point of tolerance by mouth continuously, last dose given April 19, 1917, sample taken April 30, 1917, very positive trace of mercury in blood.

**Case No. 3—F.** Has had syphilis for 5 years, former treatment uncertain. Case came under my observation December 20, 1916, mercury by mouth 6 weeks, then discontinued, and hypodermic injections of salicylate of mercury, 1 1-2 grains every 5 days given. Last dose April 23, 1917, sample taken April 30, 1917, slight positive trace of mercury in blood.

**Cases No. 4 and 5—C. and D.** Both of 5 years standing. Came under my observation 3 years ago, treatment by mouth exclusively, 24 months. Dismissed 9 and 12 months ago, since which time no medicine has been taken. Both resumed smoking and mild use of intoxicants. Last Wassermann taken Dec., 1916. Negative. Sample taken April 30, 1917, positive trace of mercury found in each case. These cases are remarkable in that they were both treated at the same time by the same method, both showed a trace of mercury in blood 9 and 12 months respectively, after all treatment was stopped. The evidence here would indicate that this proto-iodide remains in the blood for a remarkably long period, and of all examinations made it gives the best showing.

**Case No. 6—W.** Contracted syphilis June, 1916, came under my care immediately. Treatment by mouth exclusively, at the point of tolerance. This patient took as high as 4 1-2 grains of proto-iodide of mercury daily. Last dose April 2, 1917. Sample May 8, 1917, strong positive reaction of mercury in blood.

In the examination of these cases, I have been ably assisted by Dr. Sorgatz, who will later discuss the method of examination and give his views upon the investigation. I regret that our tests do not cover a wider range of cases, but this step may lead to further investigation that we hope will bring us much more information. At any rate we have here a wide field for speculation and research.

These tests would indicate that the use of proto-iodide of mercury by mouth remains in the circulation for a much longer period and in larger quantities than does the examination by other methods. However, this method would not be practicable in the prophylactic treatment because it would require daily dosing. I hope to be able to find a method whereby we may immunize by giving a dose of mercury once every 60 or 90 days, either hypodermatically or intravenously. I was anxious to obtain samples from subjects that had been receiving this form of treatment, probably some having used some form of cyanide, but unfortunately we could not do so in the short time we had for investigation.

If mercury in syphilitic patients will immunize him against transmission, will it not immunize one against acquiring syphilis used as a prophylactic? If this supposition is true, what form of administration is most feasible? What preparation of mercury the most positive? What part will salvarsan play in this procedure? I must confess my inability to answer, but I hope that this effort may lead to further investigation and that good may eventually come.

## TREATMENT OF LATENT SYPHILIS.\*

P. P. NESBITT, Muskogee, Oklahoma.

In this paper we will confine ourselves to the consideration of latency in acquired syphilis.

Accepting the definition of latent syphilis as those who have had a syphilitic infection and have not been cured but in whom there are no clinical symptoms patent, we are dealing with a large class of our population. Observers declare that from 18 to 20 per cent of the population of our cities have at some time during their lives a syphilitic infection. Investigations in localities outside the cities show that the incidence of syphilis is not much below this rate. Perhaps the statement that one-sixth of the population of the United States have a syphilitic infection at some time during their lives is a conservative estimate. Of this enormous number we know that a very great majority do not receive the treatment that has shown to be necessary to effect a permanent cure. As a consequence all physicians and surgeons, no matter what their line of work, must keep in mind the possibility of latent syphilis in their patients suffering from any disease.

In acquired syphilis the first period of latency, if it may be called so, is the time elapsing from the time of inoculation until the appearance of the chancre. Except for immediate prophylactic treatment of any break in the skin or mucus membrane, this period does not call for treatment as we have no means of making a diagnosis at this time.

Sometimes if the chancre heals promptly, there is a short period of latency before the appearance of secondary lesions. If a definite diagnosis has been made by finding the specific organism, or by a positive Wassermann test, this is the most favorable time for a speedy cure. Probably a single treatment of salvarsan at this time will cure many cases and two or three doses of salvarsan followed by from three to six months of mercurial treatment will effect a cure of a great majority of these cases.

During the stage of the secondaries there may be short periods of latency, but from the standpoint of this paper they are not important, as everyone who treats syphilis knows that it is important to continue energetic treatment at this time. This brings us to the stage that is usually meant when we speak of latent syphilis, that time following the secondary stage when there are no clinical symptoms recognizable. It may last for from a few weeks to five, ten or even thirty years; there may or may not be tertiary lesions, but that the syphilis is not cured may be proved by the Wassermann test of the blood or spinal fluid.

Treatment of latent syphilis is a prophylactic measure, taken to prevent later manifestations that are frankly syphilitic as well as diseases and conditions that are directly or indirectly caused or influenced by an uncured syphilis. Each of these classes are large and I will mention only some of the most important: The frankly syphilitic lesions include the so-called tertiary lesions, gumma, which may involve any of the tissues of the body, the late cutaneous manifestations, syphilis of the bones, syphilis of the heart aorta and the arteries, especially the coronary and cerebral, syphilis of the viscera, syphilitic meningitis and syphilis of the brain, spinal cord and nerves. Paralysis and degeneration of the cranial nerves, unless due to trauma, are usually due to syphilis. Among the syphilitic lesions of the brain and spinal cord are those causing general paralysis of the insane and tabes dorsalis. These were formerly known as para-syphilitic conditions, but are now recognized as truly syphilitic.

Involvement of the heart and aorta is almost a constant finding in latent syphilis. Syphilis of the coronary arteries is probably the most frequent cause of angina pectoris, and syphilis of the cerebral arteries is a very frequent cause of apoplexy, especially where it occurs in the young or middle aged.

---

\*Read at Medicine Park, Okla., May 10, 1917.



Syphilis of the bones may cause them to become brittle and easily fractured. A very large majority of delayed union or non-union of fractures occur in syphilitic individuals. Delayed healing of accidental or surgical injuries of the soft tissues, unless caused by acute infections, are usually due to syphilis.

We have all seen many cases where obscure and puzzling conditions were finally explained by finding a positive Wassermann reaction or cleared up by giving the patient the "therapeutic test" of anti-syphilitic treatment.

Among other diseases or conditions which cannot be proved to be directly due to syphilis, but which occur more often in syphilitic than in non-syphilitic persons, are anemia, nephritis, diabetes, tuberculosis and Addison's disease. From these very incomplete lists we can see the dangers that menace any individual with latent syphilis and can realize the extreme importance of trying to cure every case that falls into our hands.

Treatment must be long continued and often becomes tedious and irksome to both patient and physician, but the reward is that if intelligently and persistently carried out nearly every case can be cured at least to the extent that no manifestations or effects that can be attributed to the disease will occur.

In the treatment of latent syphilis we must rely on one or more of the following drugs: The preparations of mercury, the preparations of arsenic, and the preparations of iodine.

The mercury preparations may be used as inunctions, injected intra-muscularly, or given by mouth. For inunctions the preparations usually employed are blue-mass, or ammoniated mercury combined with lanolin or coca-butter. Of these the blue-mass is much superior and when properly rubbed is a very effective way of using mercury. On account of its uncleanness it is very hard to get a patient who has no patent symptoms to use it or at least persist in the treatment for a sufficient length of time. For intra-muscular injection two classes of preparations are used,—the soluble and the insoluble. Of the former the bichloride and the benzoate are perhaps more often used, and of the latter class the salicylate is more often the drug of choice. Both are very effective when used in proper dosage and for a sufficient length of time. The objections to this method of treatment are the pain at the site of injection and the difficulty of controlling the condition when mercurial poisoning occurs. For internal administration the bichloride, the biniodide and the proto-iodide are the preparations usually employed. Personally I have had poor success with the proto-iodide but have had good results from the biniodide and the bichloride, the latter usually combined with potassium iodide. The action of mercury by mouth is slower and more uncertain than when given by inunctions or the needle and is sometimes not well tolerated. However, in the majority of cases it is well tolerated and good results are obtained. It is free from the uncleanness of the inunctions and the pain of the intra-muscular injections, and the poisonous effects, if they occur, are more easily controlled.

Iodine and its preparations are not in the true sense curative of syphilis, but in any case past the secondary stage, which includes latent syphilis, it is an important aid to the treatment. How it does this is not fully understood but perhaps as good an explanation as any is that the specific organisms are protected in certain localities by the infiltration of surrounding tissues and the iodine stimulates the absorption of this infiltration allowing the mercury and arsenic to reach and kill the spirochetes. Potassium or sodium iodides are the preparations usually used. They may be given by mouth, by rectum, or intra-venously. In treating latent syphilis the only practical method is to give them by mouth. They should be given in moderate doses, 15 to 30 grains in six to eight ounces of water, and should be given about one hour after meals.

The iodine preparations sometimes cause gastro-intestinal irritation or uncomfortable swellings of the face and the mucous membranes of the nose and eyes. When these symptoms appear it is necessary to reduce the dose or even to suspend the administration for a while.

Of the arsenical preparations the trioxide and Fowler's solution given by mouth have been used for a long time in the treatment of syphilis, but on account of their toxicity they could not be given in sufficient amounts to have any curative effect. Atoxyl used hypodermically was the first arsenical preparation to be used with any marked benefit, but it also is too toxic for satisfactory use. Sodium cacodylate was the first arsenical preparation to be really successfully used in treating syphilis. Some observers still claim it to be the best of the arsenical preparations. This was the view held by Murphy at the time of his death. Venarson is the trade name for a preparation which the Council on Pharmacy and Chemistry of the American Medical Association state is a solution containing nine grains sodium cacodylate, one-fortieth grain mercury bin-iodide and three-fourths grain sodium iodide to each full dose. It was rejected by the Council on the grounds that the name does not express the chemical composition and that it is an unscientific combination. Salvarsan and neo-salvarsan, preparations worked out by Ehrlich, are now the most extensively used of any of the arsenical preparations. While it has been proved that they do not meet the early expectations of Ehrlich, that is, they will not, except in certain cases, by a single injection, effect the complete destruction of all the specific organisms of syphilis in the body, they are still among the most useful drugs we have in the treatment of syphilis. Arseno-benzol is a preparation made in this country when on account of the war we have been unable to get salvarsan, and is said to be identical with salvarsan. All these later preparations of arsenic are used either intra-muscularly or intra-venously. There is a difference of opinion as to which is the better way, but the preponderance of opinion seems to favor the intra-venous method.

Contra-indications for the employment of the arsenical preparations are extreme weakness, presence of nephritis, and weakness of the heart.

In treating a case of latent syphilis, we must be guided in the choice of methods by several considerations. The first of these is the physical condition of the patient. Where there is marked anemia or the general health of the patient is very poor, it will not do to push the treatment too rapidly. Moderate doses of mercury and iodine should be given and sometimes small doses of the arsenical preparations. It is sometimes advisable to build up the health of the patient by tonics and diatetic treatment either during the treatment for the syphilis or before it is begun.

The second class are those whose health will permit of any treatment that is deemed necessary. Treatment of these must be varied by several considerations. First the occupation. Of these we have those who are willing to spend whatever time is necessary away from their work, and on the other hand those who are willing to take treatment as long as necessary and to take any treatment so long as it does not interfere with their work. Another consideration is the temperament of the patient. It must be remembered that we are treating patients who have no active trouble and it is often hard to make them realize the necessity of the treatment. We have first the class who will take any kind of treatment for a short time but who soon become tired and give it up. For this class we should use intensive treatment. For instance, full doses of salvarsan at weekly intervals, at the same time give mercury by inunctions or the needle and give moderately large doses of iodide by the mouth. The object is to give as much treatment as possible in the limited time that the patient will keep it up.

Another class of patients are those who are easily frightened by the prospect of intra-venous or intra-muscular treatment. To this class of patients mercury should be given to the point of slight ptyalism, and iodide in moderate doses, and both should be continued over a long period of time.

A third class which is unfortunately not very large, is comprised of those who will take any treatment advised and stay with it until the physician pronounces them cured. For this class of patients to my mind the ideal treatment is moderately large doses of salvarsan at intervals of two to four weeks, at the same time using mercury by the needle or by the mouth to the point of slight ptyalism and

potassium or sodium iodide, 15 to 20 grain doses, over long periods of time. This treatment should be continued for some time after the Wassermann test becomes negative.

In my opinion the cause of failure to cure latent syphilis is usually that the treatment is not continued for a sufficient length of time. I believe that treatment should continue for at least six months after the Wassermann test becomes negative. The feeling on the part of the patient and the doctor that the case is cured as soon as a negative Wassermann test is obtained, is unfortunate. As to when we can say that a case is completely cured is a question on which opinions differ greatly. I believe Dr. Lloyd Thompson of Hot Springs, Arkansas, sums the matter up very well when he says: "The patient should not be discharged as cured until the following conditions have been fulfilled: First: A clinical cure; second, a constantly negative Wassermann on the blood at frequent intervals for two years after the last treatment; third, a negative spinal fluid at periods of one and two years after last treatment."

### APPLICATION OF THE CLINICAL LABORATORY TO THE DIAGNOSIS AND TREATMENT OF SYPHILIS.\*

O. J. WALKER, M. D.

St. Anthony's Hospital, Oklahoma City, Okla.

If there is one way in which the clinical laboratory can serve the clinician in a practical manner, it is in the diagnosis and treatment of syphilis. If modern laboratory methods have contributed anything to medicine, and to sick and suffering humanity, it is in the recognition and alleviation of lues.

It is the purpose of this paper to endeavor to point out and indicate the value of some of the various means in which the laboratory may be applied as an aid to the physician in dealing with one of the greatest scourges of civilization.

**Diagnosis.** Let us first consider the diagnosis of syphilis, from a laboratory standpoint. Since Schaudin's discovery of the *treponema pallidum* as the specific cause of syphilis, a demonstration of this organism has become essential to an absolute diagnosis of the disease. It is during the primary stage that an absolute diagnosis is hardest to make; so, therefore, finding the organism of syphilis in the chance is of prime importance. The organism may also be demonstrated in papules, condylomata, in enlarged glands, and even in the blood.

**Dark Field Illumination:** By far the best method for demonstrating the *treponema* is the dark field illumination. Other means of staining the parasite of syphilis are Burri's India ink method, collargol method, and Giemsa's and Goldhorn's stain. None of these latter, however, are so satisfactory as the dark field method.

Staining tissue sections is not used very extensively for diagnostic purposes although the spirochete may be demonstrated quite readily in sections of syphilitic tissue. This method is most applicable to examination of placenta and still-born fetuses. Levaditi's method is the most satisfactory.

**Examination of the Blood:** Next to finding the *treponema*, examination of the blood furnishes the best means of diagnosing syphilis. Of these methods the blood count, the complement fixation test, and other serological, or sero-chemical tests are available.

Although there is nothing characteristic in the blood count of syphilis, still much corroborative knowledge may be gained by careful enumeration of red and white cells—differential count, and hemoglobin estimation. In severe infections we sometimes get a blood picture simulating closely that of pernicious anemia.

---

\*Read at Medicine Park, Oklahoma, May 10, 1917.



The differential count usually shows an increase in the large mononuclear lymphocytes. The white count is only slightly increased, if at all.

**Complement Fixation Test:** Probably no single laboratory method is of more importance in the diagnosis of syphilis than the complement fixation test. It is today one of the most constant symptoms of the disease in all stages.

Under the most favorable conditions, when the Wassermann reaction is performed by one who is skilled in the technique and thoroughly understands its principles and their interpretation, we may confidently expect from 60 to 70 per cent<sup>3</sup> positive reactions in all syphilitic sera examined. The Hecht-Weinberg reaction takes into consideration the natural anti-sheep amboceptor and complement. Gradwohl<sup>3</sup> has modified this reaction so as to make a titration of the hemolytic index of each serum simple and easy of performance, and claims, with this as a control to the Wassermann, to be able to add from 12 to 15 per cent more positives in true syphilitics. He concludes that intensive treatment quickly reduces positive Wassermans to negative, except in "Wassermann fast" subjects; that the Hecht-Weinberg-Gradwohl persists positive long after the Wassermann becomes negative in the face of treatment; that the Hecht-Weinberg-Gradwohl, reduced from positive to negative by treatment, is more significant of successful treatment than the Wassermann; that when the Hecht-Weinberg-Gradwohl becomes negative under treatment it seldom lapses back to positive and that all negative Wassermans should be backed by a negative Hecht-Weinberg-Gradwohl. Kolmer,<sup>4</sup> Heidingsfeld,<sup>3</sup> Gruskin,<sup>3</sup> and others have confirmed these claims. We have been using this control routinely in our laboratory for the past four months and so far have found it in agreement with all that its exponents claim for it.

**Value of the Wassermann Reaction:** The Wassermann reaction is not the "last word" in the diagnosis of syphilis. It is but one symptom, but one link in the chain of evidence, and must be interpreted in the light of the history and clinical findings. "A weakly positive Wassermann reaction in the absence of history, or clinical evidence of syphilis should never be taken as final. One negative test should not be taken as disproving the presence of syphilis, especially in cases with suspicious history or clinical evidences of disease, as it has been shown that the reaction may vary from day to day in untreated syphilis.<sup>5</sup> However, several negative tests, including the so-called provocative Wassermann and a negative Hecht-Weinberg-Gradwohl control, performed at considerable intervals, should be accepted as evidence of the control of syphilis, save in the presence of unmistakable clinical symptoms. The general average of positives for the primary stage is about 70 per cent.

In regard to the percentage of positive Wassermann reactions obtained during the later course of the disease investigators differ. In untreated cases during the first year practically 100 per cent<sup>7</sup> of syphilitics will give a positive Wassermann. In syphilis of the nervous system, especially in tabes and paresis, the Wassermann reaction of the blood is quite constantly positive.

In syphilitic involvement of the central nervous system, other than tabes and paresis, the blood serum reacts positively in from 75 to 80 per cent of the cases.<sup>10</sup>

In congenital syphilis, according to Holt,<sup>11</sup> practically 100 per cent of cases show a positive Wassermann.

Craig and Nichols,<sup>12</sup> have shown that the ingestion of considerable quantities of alcohol by the patient within 24 hours of taking his blood, and in some cases as long as three days, may change a positive into a negative reaction. Another important factor which influences the Wassermann reaction is that, if the serum is not perfectly sterile, bacterial contamination will develop so-called anti-complementary bodies.

**Specificity of the Wassermann Reaction:** It is now known that certain diseases other than syphilis may occasionally give a positive Wassermann reaction.

However, all of these diseases other than syphilis, with the possible exception of yaws, can usually readily be excluded. It is possible, however, for a patient to be suffering with syphilis and at the same time be afflicted with another disease. In regard to a positive Wassermann in cases of acidosis, Warthin and Wilson<sup>18</sup> recently have shown that of six diabetics coming to autopsy, all six showed unmistakable evidence of syphilis.

**Other Serological Tests:** A number of other serological, or sero-chemical tests for syphilis, depending upon other principles than the complement fixation, have been devised. None of these tests, however, are as delicate, nor reliable as the Wassermann reaction.

**Luetin Reaction:** The luetin reaction, since its discovery by Noguchi, has been used extensively by many investigators, and its value established beyond dispute. However, it has not in any sense usurped the place of the Wassermann reaction, but merely acts as a supplement to it. While the Wassermann reaction is of most value in the early course of the disease, especially in the untreated cases, (except paresis) the luetin test is of prime value in the latter stages when clinical evidence is lacking and in congenital lues.

Recently Sherrick, Kolmer,<sup>25</sup> Debuys and Langford,<sup>26</sup> and others have shown that potassium iodide and other iodine containing drugs administered either simultaneously, or shortly before, or after the injection of the luetin, will cause a positive reaction in normal as well as syphilitic cases. All these authors conclude that this does not alter the value of the luetin test, but simply emphasizes the importance of ruling out these drugs before administering the test.

**Examination of the Placenta:** Slemons,<sup>29</sup> in a comparative study of the Wassermann reaction and the placental findings in 360 consecutive confinements, found the tests to agree absolutely in 95 per cent of obstetrical patients. He advises that a study of the freshly teased chorionic villi be made routinely in obstetrical practice. If their appearance points toward the presence of syphilis, hardened and stained sections of the placenta must be examined and the Wassermann reaction made on the mother's blood. Furthermore all these observations should be made whenever the fetus is premature.

**Cerebro-spinal Fluid:** Lumbar puncture is today a simple and safe procedure where careful aseptic precautions are observed, and the examination of the spinal fluid as a diagnostic measure has become one of the most valuable laboratory procedures. An examination of spinal fluid is the surest means we have at present of discovering the presence of latent syphilis, especially syphilis of the nervous system, paresis and tabes. The examination of the spinal fluid should consist of an estimation of the protein content, cell count, complement fixation of the spinal fluid, and Lange's Colloidal gold test.

**Protein Content:** The estimation of the protein content is readily and easily made by the Nonne-Apelt test, Noguchi's butyric acid test, Pandey's method, or Kaplan's method. An increase in the protein of the spinal fluid is observed in practically all syphilitic involvement of these organs. It will not however distinguish between syphilitic and non-syphilitic diseases, nor will it differentiate the various syphilitic processes.

**Cytology:** Increased cell count denotes an inflammatory, irritative condition of the lepto meninges, but is not necessarily syphilis. In syphilitic involvement of the central nervous system the majority of the cells are small lymphocytes.

**Complement Fixation with Spinal Fluid:** In diagnosis the same statements apply to the spinal fluid Wassermann as were made concerning the blood Wassermann, namely that the reaction must be interpreted only in the light of clinical evidence, or at least, in the light of other laboratory findings. The Wassermann reaction on the spinal fluid has been found positive in nearly 100 per cent of fully

developed cases of paresis. In about 80 per cent of early cases of tabes dorsalis the Wassermann test is positive. Nonne claims it is positive in nearly 100 per cent of the cases if large quantities of fluid are used in the reaction.

**Lange's Colloidal Gold Test:** Lange demonstrated that the excessive amount of protein found in pathological spinal fluids caused a precipitation of the gold solution and that this precipitation occurred within definite dilution limits that were practically specific for the syphilitic conditions of the central nervous system, especially paresis and tabo-paresis. It is a conceded fact that the colloidal gold test is today one of our greatest aids in the diagnosis of general paresis, and, while the curve of tabes is not at all typical, or constant, it always is positive in untreated cases.

**The Laboratory and Treatment:** It is now a recognized fact among syphilographers that successful treatment cannot be carried out unless controlled by repeated Wassermann examinations. The value of the Wassermann as a control of treatment may be summarized as follows: 1. If frequently made, it enables one to diagnose relapses. 2. It appears before clinical evidences of the disease. 3. It enables us to use mercury and salvarsan intelligently. 4. It has shown that the absence of symptoms is no criteria that the patient is cured.

Thompson<sup>39</sup> administers salvarsan together with local and general treatment until the Wassermann is found negative. One month following cessation of treatment the Wassermann is again made. If this one is negative, three more tests are made at six months intervals. If these are all negative and the spinal fluid is found normal on at least two occasions one year apart, the patient is considered as probably cured.

Where the Wassermann reaction remains positive in spite of the most intensive and long continued treatment, although all clinical evidence of the disease has vanished, such cases cannot be considered as cured.

Piersol,<sup>34</sup> states that "No apparently cured secondary syphilis should be discharged till spinal puncture has demonstrated that involvement of the nervous system is absent." He recommends the performing of Lange's colloidal gold test in addition to the Wassermann, cell count and globulin estimation. His criteria of cure depends upon repeatedly negative Wassermans for at least two years after provocative salvarsan and normal spinal fluid.

Nonne<sup>36</sup> concludes that in case of syphilis of the nervous system where the four reactions, namely, Wassermann of the blood, Wassermann of the spinal fluid, estimation of the globulin, and the cell count of the spinal fluid are all negative, syphilis has really ceased to exist. The persistence of one or more of the four reactions demands a continuance of the treatment in cerebro-spinal lines.

**Summary:** 1. In diagnosis of syphilis, the laboratory is able to furnish indispensable help to the clinician.

2. It is of utmost importance to examine all suspicious looking sores for the spirochete pallida, because it can be found in most uncomplicated chancres, and proper treatment instituted without delay, with the very best promise of permanent cure.

3. The dark field illumination method is the most successful for demonstrating the treponema pallida.

4. Routine examination of the placenta in all obstetrical cases is recommended as a simple and easy method of obtaining valuable diagnostic information in regard to syphilis. Suspicious findings should be further checked up by the Wassermann and tissue sections.

5. The Wassermann reaction of the blood is today our most constant symptom of syphilis. A single negative Wassermann does not preclude the presence of syphilis.

6. The Hecht-Weinberg reaction as modified by Gradwohl is probably our



best control of the Wassermann reaction, and finds its most value as a control of treatment.

7. The luetin skin reaction is of chief value in congenital and latent syphilis and is reliable if properly controlled and interpreted.

8. Examination of the spinal fluid should always be made in organic disease of the central nervous system and should include, estimation of the protein content, cell count, Wassermann reaction, and gold colloidal test.

9. In general treatment of syphilis today is inadequate, and in view of our present knowledge, physicians should be held negligent unless such treatment is controlled by repeated Wassermann reactions of the blood, and complete examination of the spinal fluid.

1. Annals del Inst. Pasteur, 1901, XV, p. 289.
2. Deut. med Wehnschr. 1906, XXXII, p. 745.
3. Jr. Amer. Med. Ass'n. 1917, LXVIII, p. 514.
4. Jr. Amer. Med. Ass'n., 1917, LXVIII, p. 514-520.
8. Craig—Jr. Amer. Med. Ass'n., 1914, LXII, p. 1232.
9. Studies in Syphilis, Wash. Dept. Bulletin No. 3, Washington, 1913, p. 37.
10. Thompson—Syphilis, 1916, p. 155.
11. Dittol.
12. Kaplan—Serology of Nervous and Mental Diseases, Phil. and London, 1914, p. 191.
13. Nonne—Syphilis and the Nervous System, Phila. and London, 1913, p. 352.
14. Thompson—Syphilis, 1916, p. 156.
15. Amer. Jr. Diseases of Children, 1913, VI, p. 166.
16. Jr. Amer. Med. Ass'n., 1911, LVII, p. 474.
17. Fox—Am. Jr. Med. Sciences, 1910, p. 725.
18. Bass—N. Y. Med. Jr. 1909, XC, p. 1000.
19. Ibid., p. 1206.
20. Jr. Amer. Med. Ass'n., 1913, LX, p. 1139.
21. Ibid., 1915, LXIV, p. 804.
22. Amer. Jour. Med. Sciences, 1916, CLII, p. 157.
23. Proc. Soc. Exper. Biol and Med., 1909, VI, p. 49. Ibid, 1909, VII, p. 2. Jour. Infec. Dis., 1909, VI, p. 688.
24. Amer. Med. Ass'n. Jr., 1914, LXII, p. 293.
25. Wein—Klin Wehnschr., 1913, XXVI, p. 1702.
26. Am. Med., Apr., 1915.
27. Munch—Medizinische Wochenschrift, LXIV, No. 1.
28. Jour. Exper. Med., 1911, XIV, p. 577; Jour. Amer. Med. Ass'n., 1912, LVIII, p. 1163.
29. Amer. Med. Ass'n Jr., 1915, LXV, p. 404; Mich. State Med. Soc. Jr., XIV, No.1.
30. Amer. Med. Ass'n Jr., p. 1435; Jr. Immun., Baltimore, I, No. 4.
- Jour. Amer. Med. Ass'n., Sept. 2, 1916, p. 718.
31. Am. Jr. Dis. Children, Oct., XII, 4, p. 387.
32. New York Med. Jr., 1914, C, p. 34.
33. Amer. Jour. Med. Sc., CLIII, 2, p. 212.
34. Ueber Placenton Syphilis, Arch; F. Gynak., 1873, V, p. 1.
35. Brain, 1914, XXXVII, p. 79.
36. Am. Jour. Dis. Children, 1915, IX, p. 19.
37. Syphilis. Diagnosis and Treatment, Phila. and New York, 1916, p. 256.
38. Soc. Prog. Med. Soc. Pa. Jr. Amer. Med. Ass'n., Oct., 14, 1916, p. 1181.
39. Jour. Int. Diseases, XXXIV, 9, p. 633.
40. Syphilis and the Nervous System, p. 381.

# JOURNAL OF THE OKLAHOMA STATE MEDICAL ASSOCIATION

VOLUME X

OCTOBER, 1917

NUMBER 10

PUBLISHED MONTHLY AT MUSKOGEE, OKLA., UNDER DIRECTION OF THE COUNCIL

DR. CLAUDE A. THOMPSON, EDITOR-IN-CHIEF

ENTERED AT THE POST OFFICE AT MUSKOGEE, OKLAHOMA, AS SECOND CLASS MAIL MATTER, JULY 28, 1912

THIS IS THE OFFICIAL JOURNAL OF THE OKLAHOMA STATE MEDICAL ASSOCIATION. ALL COMMUNICATIONS SHOULD BE ADDRESSED TO THE JOURNAL OF THE OKLAHOMA STATE MEDICAL ASSOCIATION, 307-8 SURETY BUILDING, MUSKOGEE, OKLAHOMA.

The editorial department is not responsible for the opinions expressed in the original articles of contributors.

Reprints of original articles will be supplied at actual cost, provided request for them is attached to manuscript or made in sufficient time before publication.

Articles sent this Journal for publication and all those read at the annual meetings of the State Association are the sole property of this Journal. The Journal relies on each individual contributor's strict adherence to this well-known rule of medical journalism. In the event an article sent this Journal for publication is published before appearance in the Journal, the manuscript will be returned to the writer.

Failure to receive the Journal should call for immediate notification of the editor, 307-8 Surety Building, Muskogee, Okla.

Local news of possible interest to the medical profession, notes on removals, changes in address, deaths and weddings will be gratefully received.

Advertising of articles, drugs or compounds not approved by the Council on Pharmacy of the A. M. A. will not be accepted.

Advertising rates will be supplied on application. It is suggested that wherever possible members of the State Association should patronize our advertisers in preference to others as a matter of fair reciprocity.

## EDITORIAL

### THE OKLAHOMA PHYSICIAN AND WAR.

We give below a list of physicians of Oklahoma who have been commissioned in the Medical Reserve Corps up to September 24. The list does not contain the names of the medical department of the Oklahoma National Guard, all from Oklahoma of course, who have also been mustered into the service. This list should most emphatically refute the intimation from certain small Oklahoma sheets that the Oklahoma profession is not doing its duty at this crucial time. In fact, when one considers that there are today 1473 members in good standing in the medical association and that nearly all of these men come from that body, the showing is remarkably good. Most of the men commissioned were earning more each month than the government will ever consider paying them; in fact, so far as we are advised, two at the most have received commissions as Majors and five or six as captains. We have yet to see any profession equal this showing. We must not overlook the fact that a physician when uprooted from his surroundings, where he has slowly and painfully by years of work entrenched himself, is making a greater sacrifice than most people appreciate. The whole thing should effectually stop the foolish talk of conscripting physicians—a procedure advocated in some states as a remedy for the alleged slowness of responses to calls to accept commissions. We have no objection to the application of the draft principles to all the people, *but to all alike*; if the authorities want fifty-five year old physicians, they should scan the fifty-five year old idle rich and loafers of all other classes and call all on an equal footing.

We cannot resist, either, the temptation to here call attention to the scant consideration shown our profession in the past by our lawmakers, who constantly saw fit to impugn the motives and question the good faith of everything medical proposed by a profession who knew more about the proposition than they could possibly know. Now when the very life of the Nation's men is dependent on the good sense and skillful watchfulness of the physician, our past traducees and critics are the first to howl for help and criticize our profession for not making the sacrifices they think should be made. They have forgotten that the skill of the

physician is just as much needed in peace as in war, though in times of peace they hamper by every foolish restriction his sensible proposals to curb and lessen disease. We should like very much to see, were it not for the probable fatal consequences, a platoon made up of those members of the late legislature who so valiantly voted to give the chiropractor the right to maunder around the community as a physician, and we would want this platoon sent to the front solely in the charge of that aggregation. Were it not for the inhumanity of the farce, we should like to see what they would do with tetanus, typhoid and smallpox, not to mention a few other conditions.

The yellow press need have no alarm. Such of them as go to the front will be skillfully attended and watched by better physicians than most of them have at home.

#### OKLAHOMA'S MEDICAL HONOR ROLL.

George Arthur Akers	Ada	Alvin Mann McMahan	Hillsdale
Johu Gordon Thomas	Alluwee	Henry Clay Lloyd	Hobart
Raymond H. Fox	Altus	Harry Arthur Briggs	Henryetta
Samuel Houston Landrum	Altus	Orange Elbert Welborn	Kingston
William Ebert Simon	Alva	Karl Fitzgerald Vandever	Lahoma
Parkey Howard Anderson	Anadarko	George Stanley Barber	Lawton
Milton Henry Edens	Anadarko	Jackson Broshears	Lawton
Charles Campbell Gardner	Ashland	James Garfield Janney	Lawton
Isaac Frederic Clark	Avant	Louis A. Milne	Lawton
Charles Ralph Ozias	Aylesworth	Samuel Warren Wilson	Lindsey
John Vanmore Athey	Bartlesville	Roland Reed Culbertson	Maud
Otto Ishmael Green	Bartlesville	Louis C. Kuyrkendall	McAlester
Herman Eugene Yazel	Bartlesville	Leonard Scott Willour	McAlester
Thomas Franklin Renfrow	Billings	William Givens Ramsay	McCurtain
Alonzo Clinton Hawkins	Blackwell	Calvin Edward Bradley	Mt. View
William Richard Barry	Bradley	James Lindsey Patterson	Mutual
Clarence Bandle McDonald	Broken Bow	Henry Thomas Ballantine	Muskogee
Francis Charles Myers	Broken Arrow	William Dixon Berry	Muskogee
Walter Griswold Bisbee	Chandler	Benjamin Henton Brown	Muskogee
Frank Reitz Buchanan	Canton	Albert Nila Earnest	Muskogee
Francis Ray First	Cashion	Robert William Motley (Col.)	Muskogee
George Andrew Hylund	Cato	Pleasant Pomeroy Nesbitt	Muskogee
Alexander Boyd Montgomery	Checotah	James Grady Harris	Muskogee
Harry Clifford Antle	Chickasha	William Burton Newton	Muskogee
Herman Brewer McFarland	Cleveland	Joseph Glass Noble	Muskogee
Monte Cristo Comer	Clinton	Floyd Edward Warterfield	Muskogee
Paul Raymond Siberts	Cooperton	John Lewis Day	Norman
Edward Sherman Weaver	Dill	Thomas Jefferson Palmer	McAlester
Julius William Nieweg	Duncan	Russell Lenoir Kurtz	Nowata
Charles Dallas Blachly	Drumright	Frank Marion Bailey	Okla. City
Logan Evans	Drumright	Abraham Lincoln Blesh	Okla. City
William Penn Sims	Drumright	Rex George Bolend	Okla. City
Thomas H. Scott	Dustin	Albert Ewing Davenport	Okla. City
Glenn Luther Barker	Elk City	Joseph T. Edwards	Okla. City
Philip Frielkelton Herod	El Reno	Dr. Austin Lee Guthrie	Okla. City
Benjamin Thomas Bitting	Enid	James Worrall Henry	Okla. City
Lyman Lyndon Bunker	Enid	Albert Clifford Hirshfield	Okla. City
Robert Charles McCreery	Erick	Robert Hayburn Howard	Okla. City
Daniel Erastus Little	Eufaula	George Hunter	Okla. City
John Norris Shaanty	Eufaula	Clarence Edward Lee	Okla. City
Fred Lindsey Patterson	Fargo	Ross David Long	Okla. City
Herbert C. Woolley	Ft. Sill	George Davidson McLean	Okla. City
Burton Fair	Frederick	Lloyd Melville Sackett	Okla. City
Barton Hiram Watkins	Gotebo	Fenton Mercer Sanger	Okla. City
James William Wheeler	Gracemont	Roy Abner Webb	Okla. City
George Albert Causey	Grandfield	Willis Kelly West	Okla. City
William Ward Rucks	Guthrie	Charles Morris Ming	Okmulgee
Thomas Henry Wright (Colored)	Guthrie	Clarence Loveloy Wellman	Okmulgee
Daniel Schenk Lee	Guymon	Novel Walter Campbell	Poteau
Pendleton Gardner	Haileyville	Sims Duvall Nevill	Poteau
Robert Elice Calhoun	Hallett	John Leonidas Plumlee	Poteau
Robert Sales Riley	Hartshorne	Carl Puckett	Pryor
Henry DeWitt Shankle	Hastings	William Jerry Whitaker	Pryor
Charles Crawson Sims	Healdton	Earl Duwain McBride	Ralston
Eugie Alva Campbell	Heavener	Charles Percy Murphy	Redrock
John Lee Riley	Henryetta	Jesse Albert Goode	Schoolton



Frank J. Carson	Shawnee	Lee Roy Wilhite	Helena
James Henry Mallory	Shawnee	Jesse Benj. Hollis	Hollis
Edgar Elmer Rice	Shawnee	Henry Whitefield Maier	Hugo
Tazwell David Rowland	Shawnee	John Howard Baker	Indianola
Cecil Ben Shrout	Shawnee	Ester Lee Jones	Ingersol
Howard Alonzo Wagner	Shawnee	Isaac W. Rogers	Kellyville
John Asa Walker	Shawnee	Jno. Winston Pendleton	Kingsfisher
Julius A. Muller	Snyder	Frank Glenn Francisco	Kremlin
Harry James Sims	Stigler	Geo. Washington Tilly	Kusa
Harry McQuown	Stillwater	Lorin Kuce	Lawton
Samuel Ray Evans	Stilwell	Clarence E. Northcutt	Lexington
Howson Clark Bailey	Sulphur	Frank H. McGregor	Mangum
William Medwin Tucker	Sulphur	Alfred Edward Martin	Marietta
Charles Arthur Peterson	Tahlequah	Henry Chas. Tyler Richmond	Marshall
Joseph Martin Thompson	Tahlequah	Thomas Burke Triplett	Mooreland
Robert Melvin Shepard	Talihina	Chas. Wm. Heiztman	Muskogee
Wm. Joseph Omer	Thomas	Esley Elwood Lawson	Oakwood
Ethan Esley Waggoner	Tonawa	Joseph T. Gunther	Ochelata
Henry Silas Brown	Tulsa	Chommer Pold Chumley	Okla. City
Wm. Richard Clement	Tulsa	Benj. Geo. Jones	Okla. City
George Henry Chulow	Tulsa	Littleton Alex. Newton	Okla. City
Ralph Vernon Smith	Tulsa	Curt Otto von Wedel	Okla. City
George Madison MeVey	Verden	Earl Leroy Ycackel	Okla. City
Woodward Roberts Mitchell	Verden	Lee Berkley Mathews	Okmulgee
Cecil Bryan	Vian	Harvey Ollis Randel	Okmulgee
Charles Edward Houser	Vici	Robt. Leland Westover	Okmulgee
Joseph Perry Powell	Vici	Claude Eugene Putman	Pocassett
Will Wilson Jackson	Vinita	Wm. Abe Lincoln Cossey	Prague
Walter Roscoe Marks	Vinita	Chas. Clarence Powe	Stringtown
Ernest Ezra Nunnery	Washington	Herman E. Stretcher	Supply
Timothy J. Butler	Weatherford	Wm. Thomas Blount	Tupelo
Wm. Emery Harrington	Wakita	Garnett A. Kilpatrick	Wilburton
Guy Barton Van Sandt	Wewoka	Chas. Worman Tedrowe	Woodward
Thomas Maxwell Toler	Wirt	Chas. Walter Bacon	Yale
James Allen Rutledge	Woodville	Albert Alonzo Stoll	Arnett
Robert Lee Baker	Wynnewood	James Foster Means	Claremore
Davy Lewis Garrett	Altus	Dan Miller Moore	El Reno
Samuel Thomas Campbell	Anadarko	Waldo B. M. B. Newell	Hunter
William Stout	Balke	James Lang Lewis	Lawton
Walter Edwin Koppenbrink	Bartlesville	Guy Perry McNaughton	Miami
John Lehr Reid	Blackwell	Edward Davis Morrison (Col)	Muskogee
Ralph E. Jones	Braggs	Frank Brumer Sorgatz	Okla. City
Jesse G. Marshall	Canton	James Anthony Cheek	Sallisaw
John Evans Heatley	Carmen	Jackson Smitherman	Tulsa
James Henry McCulloch	Checotah	Reuben Worrell Williams	Anadarko
Finis Ewing Rushing	Coalgate	Pirl B. Myers	Apache
Geo. E. Kerr	Chattanooga	Calhoun Doler	Bokoshe
James Robt. Bost	Coyle	Hubert William Callahan	Collinsville
Geo. Bonnas Cokor	Cyril	Jarrett Jeffrey Billington	Enterprise
Ulus Edgar Nickell	Davenport	William Albert Thompson	Kusa
Matthew Karasek	Drumright	David Calhoun Williams	Luther
Orange Walter Starr	Drumright	William G. Baird	Oak Hill
William H. Niles	Durwood	Charles Arthur Brake	Okla. City
Samuel Newton Stone	Edmond	Herbert V. L. Sapper	Okla. City
Fred H. Clark	El Reno	Thomas Anderson Hartgraves	Soper
John Baker Haggard	Foraker	Elmer Franklin Garlington	Tar River
R. Earl Smith	Gracemont	William Washington Brodie	Tulsa
Elmer Jacob Reichley	Helena		

This list contains 227 names, possibly some have been omitted, who have accepted commissions through other state organizations than ours. From time to time the additions will be published as they are commissioned.

## CURRENT MEDICAL LITERATURE

Conducted by

DRS. CURT von WEDEL, Jr., and L. J. MOORMAN, Oklahoma City  
and FRED J. WILKIEMEYER, Muskogee

## BRUCK'S SERO-CHEMICAL TEST FOR SYPHILIS.

A Report of 400 Cases Compared With the Wassermann Reaction.

By Curtiss E. Smith, M. D., Boston, and H. C. Solomon, M. D., Boston.

This contribution is under the auspices of the Massachusetts Commission on Menral Diseases.

Bruck states that since the discovery of the complement-fixation test for syphilis by Wassermann, Neisser and himself in 1906, he has been trying to find a simple chemical reaction that would take the place of the complicated technic of the Wassermann reaction. This method as he has published it, was worked out and is being used at the front, where complete laboratory equipment is not available.

Bruck describes his technic as follows: "The test is made with 0.5 cc. clear serum in a test tube, to which is added 2 cc. of distilled water, and the whole shaken. Then with a precision pipette, 0.3 cc. of the ac. nitr. purum of the German pharmacopeia is added, and the whole shaken and then set aside at room temperature for ten minutes. Then 16 cc. of distilled water is added, and closing the tube with the finger, it is shaken up and down three times carefully, not vigorously enough to make it foam. This is repeated ten minutes later, and the tube is set aside for half an hour. By this time the precipitate is entirely dissolved in the tube with the normal serum, while the syphilitic serum shows a distinct, flocculent turbidity. In two or three hours, or better still, in twelve hours, the gelatinous and characteristic precipitate is piled up on the floor of the test-tube."

The acid is prepared by diluting the acid nitricum of the U. S. P. (sp. gr. 1.403), with distilled water until the hydrometer shows the sp. gr. 1.149, which corresponds to the nitric acid of the German pharmacopeia, but since this requires a special hydrometer, a simpler method is to make a 25 per cent solution of the acid nitricum which will give about the proper specific gravity. The serum is obtained by allowing 10 cc. of blood to stand at room temperature for an hour and then centrifuging. Serum that has stood for some time may be used as well as the fresh, and even bloody serum does not seem to confuse the results to any great degree. The serum gives the same results with or without inactivation. Post-mortem blood gave results as constant as that obtained during life, in the few cases in his series. The reaction may be influenced by the size of the test tubes. The writers have found that the 13x1.9 cm. is the most favorable size.

The test being so simple and somewhat crude as a chemical reaction, therefore requires that certain precautions be observed and several hundred normal and syphilitic sera should be tried before the investigator can feel that he has a refined routine technic. The test being a quantitative one is necessarily open to the personal equation and hence some error.

The writer's technic is as follows: "The 0.5 cc. of serum is added to 2 cc. of distilled water and shaken thoroughly. Now add slowly 0.3 cc. of acid from the precision pipette, care being taken that it does not flow down the side of the tube. The tube should be shaken gently while the acid is being added, for this prevents the formation of a flocculent precipitate in normal serum which is difficult to dissolve later. After the acid is added, shake each tube gently to make sure that these flakes do not persist. It is difficult to shake each tube in exactly the smac manner, as must be done if we expect normal results. In doing the first 250 tests the tubes were allowed to stand for ten minutes, as Bruck advocates. It was found that practically all sera gave a positive reaction if allowed to stand 15 to 20 minutes, and so in the remaining tests the tubes were allowed to stand only 6 to 7 minutes. During this time the tubes should be shaken once or twice. In adding the 16 cc. of water both pipette and tube should be slanted and the water allowed to flow down the side without disturbing the precipitate. If allowed to flow freely upon the precipitate, the positive may be forced into solution as well as the negative. If all has gone well up to this point, one sees a marked difference between the normal and the syphilitic precipitates; the normal will go into solution at once, thus clouding the water, while a negative precipitate will be composed of large flakes which show little or no tendency to go into solution or clouding the water above. It must be remembered that the most flocculent positive precipitate will go into solution if the fluid is shaken or splashed too hard while the tube is being inverted. If in doubt as to the character of the precipitate, allow it to stand ten minutes longer, and again invert as before, or even repeat several times during the next hour or two. The tubes may be allowed to stand over night, during this time a precipitate usually settles in the normal tubes. This, however, differs from the syphilitic precipitate in being still finely granular and goes back into solution readily when the tubes are inverted.

It is advisable in making tests of unknown blood to run controls of known positive and negative sera. They found also they could aid the reaction by rendering the serum-water solution alkaline by one or two drops of 10 per cent potassium hydroxide. The positive sera have a larger precipitate, while the normal seem to dissolve more readily.

The tests were made on blood sera from patients admitted to the Psychopathic Hospital and its Outpatient Department. The cases being mostly of mental disease; the majority being in good general health. A comparison of the total number with the Wassermann reaction shows that there were a

general agreement of 304 of the 405 cases tested or a percentage agreement of 75 per cent. In the cases of syphilis of the central nervous system 87 per cent agreed.—Abstracted from the Boston Medical and Surgical Journal, Sept. 6, 1917, pp. 321 to 324.

Fred J. Wilkiemeyer, M. D.

### FURTHER OBSERVATIONS ON SHOCK AT THE FRONT.

By W. T. Porter, M. D., Boston.

This fourth paper by Dr. Porter, from the literary as well as the scientific standpoint, is one of the most notable and important medical contributions which the war has as yet produced.

In his first contribution blood pressure measurements were made by him in the first-line trenches at Nieuport on the Yser. Here he found the blood pressure of the soldiers on duty normal. "But at Nieuport there was no offensive, save the habitual bombardment. Fortified perhaps by habit, life under fire had become an uneventful round. It is true that the bomb, the trench torpedo, and the high explosive shell took their daily toll. The spectacle of mangled men stirred pity, but failed to change the even pressure of the blood. It might not be so in a fierce barrage. There I was told, when drum fire fills the air with a continuous roar and hillsides smoke under the bursting shells, the arterial pressure sinks, and turns toward shock. Upon the wound the weakened guard gives way, the pressure falls profoundly, and life is at once in jeopardy. An alluring speculation. Yet long experience has shown that, with regard to the circulation, speculations have no value except as incitements to research; only measurements have real value.

"May 22 I found myself about 300 meters from the crest of Mont Blond, one of the low summits in the Massif de Moronvillers, a long ridge which commands the plain beyond Chalons-sur-Marne. The strategic importance of this ridge is very great. In April it was still held by the enemy. The French offensive against the Massif began April 16. Owing probably to insufficient artillery preparation, this first attack failed; little or no ground was gained, and the losses were very heavy. One ambulance, of which I knew, prepared for 3300 wounded; they received 18000. Since that date, the French have won all that ridge except the part above my station. On May 25, the French finished the job. It was a beautiful and interesting operation. I quote from a letter written on my knee during the last hours of the battle:

"My post de secours was dug by the Germans. It consists of a cellar about 8 by 10 feet, and 6 feet deep. The roof is proof against fragments but not against direct hits. A ladder leads to a cave, 7 by 8 feet, the floor of which is 15 feet below the surface of the ground.

"Yesterday afternoon at three o'clock, the French began to prepare for storming the crest of Mont Blond—the whiteridge just before my eyes. In an hour the Germans made up their minds that an assault was intended. The artillery fire, which was continuous before, now swelled to a torrent. Each side placed a barrage. The German barrage covered the little valley behind the crest. We were on the slope nearest the crest. The bottom of the valley was about 150 meters from us, consequently we were within the barrage. Between four o'clock and midnight more than 10,000 heavy shells fell within a radius of 1000 feet from our cave. I took the count from time to time with my watch. We were driven at once into our deeper refuge. The little stuffy hole was packed with men, knee to knee; stretcher bearers, surgeons, my orderly and myself. The three surgeons played baccarat. I sat on the edge of a plank and watched the game. We had an acetylene light. The shells fell all around, shaking the place and repeatedly putting out the light. The noise was remarkable. The air was filled with screams, hisses and loud reports, followed by the slides of masses of earth. Many shells were so close that a strong push of hot gas was felt. At six o'clock the Moroccans took the ridge by storm. At midnight the bombardment slackened but did not cease. With the dawn the wounded came in streams. They were laid in the upper room. The wounds were of all sorts. The worst was a completely crushed jaw in a man with a dozen slighter wounds. One man had a hole through the temple into the brain,—a hole two inches long and half an inch wide. Another had a smashed leg, a bad head, and in the thigh a wound the size of a small orange. I watched the blood pressure carefully. Imagine a cellar with plank floor covered with clay an eighth of an inch deep. A horrible tub full of bloody dressings. Two stretchers on the floor. Ten men in a space 8 by 10 feet, shoulder to shoulder. Two candles. Sand bag wall. The roof so low that I am always hitting my helmet against the beams. The air thick with the smell of blood, sweat, alcohol, iodine, vomit. Everywhere a smear of clay—the chalky clay of Champagne. The continuous scream, roar, crash of shells. A rain of small stones, dirt, pieces of steel. Every few seconds a profound trembling, as a shell strikes closer. Four men passing bandages and iodine in the half light, over backs and under arms. The cries of the wounded. The litter of bloody garments. The fresh cases obliged to lie outside, under the fire, until the room is cleared. The brancardiers, bent under the load of the stretcher, slouching off with the dressed wounded. The dawn, the failing moon, the thick vapors and acrid stench of the barrage. The blasted hill-sides smoking under the continuous rain of death. Countless fresh shell holes all around us. The graves reopened \* \* \* \* They are bringing down the dead. They lie sprawling on the slope just below us, half sewed up in burlap, like pieces of spoiled meat."

"In spite of these conditions, the blood pressure remained normal, wounded as well as unwounded men. These observations show (1) the blood pressure is not lowered under a barrage fire, said to be as violent as the worst in the great drive at Verdun; (2) shock is probably not immediate, but develops sometime after the wound."

2.—In a second previous communication, Dr. Porter stated that fat embolism is a cause of shock. This discovery being based on his producing shock by the injection of olive-oil into the jugular vein of animals.



"Mourmelon-le-Petit is a small village in the plain of Chalons-sur-Marne. It is the seat of an ambulance de triage—a sorting station. To this station, which is within shell fire of the German lines, are brought all the wounded from a number of postes de secours on the Massif de Moronvillers. At this triage, I saw more than one thousand freshly wounded. Aside from a few abdominal wounds, in which there was probably direct injury to the vasomotor nerves of the abdominal vessels, the only shock was that caused by fracture of the femur or by multiple wounds of the subcutaneous tissue—cases in which fat-embolism undoubtedly took place."

3.—In a third communication, experiments were recorded in which the low blood pressures of shock were raised 15, 20, and even 30 millimeters of mercury by increasing the aspiration of the thorax.

"When an animal suffering from shock is made to breathe an atmosphere rich in carbon dioxide, the action of the respiratory pump may be doubled or trebled. The blood is sucked from the engorged portal veins into the heart and the arterial pressure is raised.

"In the observations at Vauxtin, the head of the wounded man was placed in a wooden box, the length, breadth and height of which were about 35 cm. The end for the neck was in two pieces. The lower piece was fixed and had a semi-circular opening for the back of the neck. The upper piece was movable. It had a semi-circular opening for the front of the neck. Third piece slid down upon the neck like a guillotine. Cotton was placed between the edges of the opening and the skin. A hole about 2 cm. in diameter was made in each of the two sides of the box. Cotton was placed in these holes to regulate the amount of carbon dioxide and air. The carbon dioxide entered one of these holes. It came from a cylinder provided with a regulating valve. On its way it bubbled through a water bottle. The volume of gas employed was judged by the number of bubbles per minute. Enough gas was used to double the respiration. The patient was in the inclined position, the feet 30 cm. higher than the head. Care was taken to discontinue the carbon dioxide respiration very gradually."

Among the cases of shock, observed at Vauxtin case three is remarkable.

Case 3. June 20, 6 a. m. Right leg crushed. Many small wounds through subcutaneous fat. Diastolic pressure 47 mm. Injections of normal saline solution in vein at elbow did not raise the pressure. Ether injected under the skin also produced no effect. Increased respiration from inhaling carbon dioxide at once increased the pressure. The pulse, which could scarcely be felt at the wrist, became plainly stronger. At about 11:30 a. m. during carbon dioxide breathing, the leg was amputated under local anesthesia, and the multiple wounds dressed without anesthesia. There was no unfavorable reaction, though under ordinary conditions (without carbon dioxide respiration) the operation would almost certainly have been fatal. Several hours after the operation, this man's femoral pulse and heart action were so good that he was believed out of danger. The carbon dioxide respiration was discontinued. In about ten minutes, the respiration became feeble and the pulse less strong. The carbon dioxide was at once renewed, but the respiration did not become stronger, and in ten minutes more the man was dead, in spite of the carbon dioxide atmosphere. He was from the beginning a case ordinarily called hopeless.—Abstracted from the Boston Medical and Surgical Journal, Sept 6, 1917, pp. 327-328.

Fred J. Wilkiemeyer, M. D.

### THE WAR TUBERCULOSIS PROGRAM FOR THE NATION

Herman M. Briggs (*The American Review of Tuberculosis*, July, 1917) points to the fact that the great war now in progress furnishes a remarkable demonstration of certain fundamental facts with relation to the development and extension of tuberculosis, facts which most of us have believed to be true, but which have often been disputed.

He refers both to the conditions under which tuberculosis has developed in the army and among the civil population of the countries at war, and the methods of extension and also the conclusions which may be drawn regarding its epidemiology. Modern preventive measures have brought practically under control all the great epidemic diseases which have acted as deadly scourges in former wars.

For the first time, so far as the author knows, tuberculosis is playing a large part in the sanitary history of a great war. While the modern popular anti-tuberculosis campaigns so widely conducted in this country, Great Britain and Germany have been questioned by many, the history of tuberculosis in France during the present war seems to establish beyond a doubt the efficacy of such campaigns. Prior to the war France had never been particularly interested in the control of tuberculosis, consequently the death rate there was three per one thousand as compared to one in England and one and a half in New York state.

At the beginning of the war there were only one thousand sanatorium beds in the whole of France for tuberculosis and these were in private institutions. There was no provision for the care of advanced cases, except in the general wards of general hospitals.

With such conditions existing in 1914, France mobilized a great army with great rapidity and without thorough physical examination of those enrolled consequently a large number of early, latent and arrested cases of pulmonary tuberculosis were mobilized.

The living conditions imposed on the troops by modern war-fare are entirely different from those obtaining in most previous wars. In the trenches the troops are shut away from light, fresh air and life in the open. When relieved from duty, the national aversion to fresh air drives the French soldier into the peasant houses where they are crowded in small rooms with limited ventilation and sunlight and very little diffuse daylight. The French troops at all times are living under unhygienic conditions except when on the march.

The results are exactly what one would have anticipated under such conditions, the development of tens of thousands of cases of tuberculosis among the troops. This applies also to the civil population where the strain and stress of war has been felt.

The history in France has been repeated to a certain extent in Austria, Hungary and Russia, and to a less extent also in Germany. England alone has not suffered to any great degree and this is because, first, of the low prevalence of the disease in the civil population of England previous to the war; second, because the army was mobilized deliberately, and careful physical examinations were made, excluding those who had suspicious histories or signs; and third, because the English troops live under distinctly better conditions at the front than do the French, because as a Nation the war infinitely more than England thus far, still Great Britain has raised an army of over five million they have become fond of fresh air and outdoor life.

The contrast between the present situation with reference to the tuberculosis problem as it exists in England and as it exists in France, is most striking and most instructive. France has suffered from men and no new or serious tuberculosis problem has been created. France on the other hand has a problem of such magnitude that it threatens even the future vitality and economic development of the French people. In England the tuberculosis problem had been efficiently met before the war; in France, on the other hand, practically nothing had been done. It is not therefore because measures for the prevention of tuberculosis are wanting or inefficient that tuberculosis has become such a serious problem in so many European countries, but it is simply because the well-tried measures have not been applied, both before and since the outbreak of the war, in an efficient way.

This experience of European countries during the present war indicates that tuberculosis under the conditions of modern warfare is greatly to be dreaded by the military authorities.

It is unnecessary to refer more than to the great ultimate economic loss involved in enrolling men who later develop pulmonary tuberculosis. The expense to the government from the long subsequent care (when the disease develops) and the cost of pensions for the men and their families will be very great, aside from the loss of lives which under ordinary conditions might have been long and productive to the country instead of being a continuous drain on its resources.

Measures adopted to prevent the introduction and development of tuberculosis among our troops as they are mobilizing cannot be too careful or too stringent. If these measures are efficient and carefully observed in mobilization of the troops and are followed subsequently in their supervision, the United States will be spared the great loss in lives and money and the army the great loss in men and energy that other countries have suffered. Bear in mind that it is not because of the lack of knowledge of preventive measures with reference to tuberculosis, but it is because of the lack of application of this knowledge that the losses abroad have occurred.

Recognizing this fact, the National Association at the request of the Council of National Defense has appointed a special committee to work with the War and Navy Department of the Government and with the anti-tuberculosis agencies of the country in devising and executing a war program for the prevention and control of tuberculosis.

The committee would recommend that in all the following cases an expert in the physical examination of the chest should make an examination before an applicant is enrolled:

1. Every man whose history shows that he has at any previous time had any illness resembling in character pulmonary tuberculosis.
2. Every man who gives a history at any previous time of an attack of pneumonia or pleurisy.
3. Every man whose history shows that one or more members of his immediate family (father, mother, brother, sister, etc.) has had pulmonary tuberculosis, or died of this disease.
4. Every man with a flat chest whose weight as compared with his height is fifteen per cent below the normal.
5. Every man who gives a history of chronic catarrh or who has a cough or any symptoms of any disease in the chest.
6. Every man in whom any abnormal physical signs of any kind are found in the chest.

The committee also recommends that an educational campaign on matters relating to the conservation of the health of our troops be carried on in connection with all military camps. Every effort which makes for better health and a strong, temperate and virile race, will be an important factor in the prevention of tuberculosis and other communicable disease.

L. J. Moorman.

**PERSONAL AND GENERAL NEWS**

- Dr. T. L. Willis, Granite, has moved to Mangum.  
Dr. E. P. Miles, of Duke, has moved to Hobart.  
Dr. J. B. Lightfoot, Muskogee, has moved to Miami.  
Dr. J. S. Hibbard, Cherokee, visited Idaho in September.  
Dr. M. Gray has moved from Mountain Park to Durant.  
Dr. C. D. F. O'Hern, Tulsa, visited New York clinics in August.  
Dr. D. D. Howell, Nowata, spent September in Colorado Springs.  
Dr. T. P. Allison, Tahlequah, is reported as recovering from typhoid.  
Dr. and Mrs. P. A. Symthe, Enid, toured Colorado in August via auto.  
Dr. R. H. Grassham and family, Caddo, visited New Mexico in August.  
Dr. Ralph Workman, Woodward, visited Colorado Springs in September.  
Dr. A. L. McInnis, Enid, is in Chicago making a special study of cystoscopy.  
Dr. and Mrs. S. W. Hopkins, Hollis, visited Colorado in September and August.  
Dr. Benj. Skinner, Pawhuska, returned from the Rochester clinics September 15.  
Dr. I. B. Oldham, Muskogee, was confined to the hospital in September for a few days.  
Dr. L. S. Willour, McAlester, Lieutenant M. R. C., has been promoted to a Captaincy.  
Dr. and Mrs. E. N. McKee, Enid, spent the summer on the northern Minnesota lakes.  
Dr. J. M. Alford, Oklahoma City, who recently underwent an operation, is convalescent.  
Dr. J. R. Collins and family, Nowata, visited Rochester and Chicago in August and September.  
Dr. Millington Smith, Oklahoma City, visited the Chicago and Rochester clinics in September.  
Dr. H. G. Crawford and family, Bartlesville, summered in Colorado, making the trip by automobile.  
Dr. J. W. Kerley, Cordell, returned in September from an extended trip to California points.  
Dr. D. M. Lawson and family, Nowata, motored to Colorado, returning early in September.  
Dr. and Mrs. A. D. Young, Oklahoma City, visited Wyoming on a camping trip in September.  
The Picher Commercial Club has out a report denying the existence of typhoid in appreciable amount in their town.  
Dr. M. C. Comer, formerly of Clinton, is in charge of the medical contingent attached to the Arsenal at San Antonio.  
Dr. Geo. H. Nieman, Ponca City, and his family have returned from a summer trip to Manitou and other Colorado points.  
Dr. W. E. Stewart, Cushing, has returned from a visit to the Chicago clinics where he had been doing eye, ear, nose and throat work.  
Dr. Blair Points, Miami, has been appointed health officer for Ottawa County vice Dr. G. P. McNaughton, who has joined the Army.  
Dr. J. Hoy Sanford, Muskogee, lost a fine automobile by theft recently. The car and thieves were overtaken at Duncan and Chickasha.  
Dr. G. E. Smythe, of Miami, has sued the Frisco Railway for \$50,000.00 for damages sustained when a train struck his machine at a crossing.

**DR. BRUCE WATSON.**

Dr. Bruce Watson, of Perry, died in Guthrie September 12. Dr. Watson had been ill some time with heart disease and his death was not unexpected. He leaves a wife and four children. Interment was made in the Perry cemetery.

Dr. Watson was born in Paris, Kentucky, October 29, 1865, receiving his preliminary education in the Kansas City High School and Missouri University, after which he graduated in Medicine from Barnes Medical College in 1897. After practicing a short time in Dearborn, Mo., he moved to Perry where he had been located since. He had been Coroner and Health Officer of Noble County for many years. Dr. Watson was a very bright man mentally, winning the gold medals of his class in 1895 and 1896.



**Dr. J. L. Blakemore**, Muskogee, recently had his new Buick Six runabout stolen from in front of his office, the theft occurring in broad daylight.

**Dr. C. W. Bacon**, Yale, has moved his family to Enid, where they will make their home during the absence of Dr. Bacon who has joined the M. R. C.

**Dr. H. H. Gipson**, Oklahoma City, has been appointed City physician to succeed Dr. Geo. Hunter, who has joined the Medical Reserve Corps for active service.

**Dr. Amos Avery**, Sapulpa, has returned from a two months visit to the Pacific States. He visited Wyoming, Colorado, Montana and other middle western states enroute.

**Custer County Medical Society** has voted an assessment on each member of five dollars monthly for the period of the war for the benefit of its members who go to the front.

**Dr. E. Forrest Hayden and family**, Tulsa, have returned from Minnesota and other northern points, where they spent the summer, Dr. Hayden incidentally attending the clinics of Rochester and Detroit.

**Dr. M. Karasek**, Drumright, narrowly escaped death August 17 when his machine was struck by a passenger train. Dr. Karasek was thrown clear of the wreck and sustained many bruises, but no serious injury.

**District Exemption Boards** generally ruled that expectant mothers who sought exemption for their husbands from military service on that account must furnish certificates of their condition from a very reputable physician.

**Dr. A. H. Yates**, Konowa, is facing serious charges in the Seminole County courts. He is charged with causing the death, by a criminal operation, of Elsie Stone, a 19 year old school teacher. He was released on \$10,000.00 bond.

**Drs. Long and Bartley**, Duncan, have formally opened their hospital in that city. The structure is a ten room brick building and contains all the conveniences necessary to a modern hospital. Miss Gertrude Burr is the superintendent.

**Dr. Ross Grosshart**, Tulsa, has been made the defendant in a suit for fifty thousand dollars. The plaintiff alleging improper attention to a fractured collar bone. Moral: if one small collar bone is worth fifty thousand, what would the whole man be worth?

**The Chiropractic Hearing** as to the sufficiency of their petition, which is being investigated by the Association's attorneys, was postponed from September 5 to October 4, when it will probably be finally disposed of so far as the Secretary of State is concerned.

**Unprofessional Conduct** for various reasons, is the charge, it is said, filed against Drs. W. A. Caldwell, Chelsea, and T. M. Stotts and Ira Allison of Tulsa before the State Board of Medical Examiners. The charges are being investigated by the Attorney General's office.

**The State Laboratory**, it is announced, will be immediately moved to Oklahoma City. Plans have been made to house the laboratory in the University Hospital. This arrangement is ideal in that it centralizes the laboratory work of the health department and the University.

**Dr. Frank B. Sorgatz**, Oklahoma City, secretary of Oklahoma County society, has re-joined the Army and is attached to the Base Hospital Laboratory at Ft. Sam Houston. Dr. Sorgatz was formerly in the Oklahoma National Guard, and served on the Mexican Border with that regiment.

**Dr. S. De Zell Hawley**, Tulsa, City Superintendent of Health and an orator of no mean attainments, was commissioned as president of the Old Glory Class, Scottish Rite Consistory of McAlester to present to the First Oklahoma National Guard at Camp Bowie, Texas, a beautiful silk flag. The presentation was made amid the pomp and panoply of military surroundings. Speeches were made by Dr. D. M. Hailey, Past Grand Master, and responded to by General Roy V. Hoffman and Major General Grebel, commandant of the camp.

**Dr. Frank Woolard**, Welch, was shot and instantly killed August 20 by Mrs. Clarke of that town. It is said previous trouble had existed between Dr. Woolard and the Clarkes; that in December, 1916, the husband of the woman forced Dr. Woolard under threat of death to issue a check for a thousand dollars, ostensibly balm for injuries alleged by Mrs. Clarke to have been inflicted upon her by Dr. Woolard; that the check, guaranteed by the bank's president was refused payment by the cashier, and that trouble had been narrowly averted between the parties on different occasions since that time. The shot fired by Mrs. Clarke was from behind and mortally wounded the physician, but the woman continued to fire into his body until the pistol was exhausted. Dr. Woolard has always been highly regarded in the community. The Craig County Medical Society by resolution extended its sympathies to his family.

## M I S C E L L A N E O U S

### DIASTASE ENZYME AND FAT CONTENTS

Recent advances in medical science have found a new significance in the diastase enzyme and fat contents of the blood. The enzyme has the power to convert starch into dextrose and this ability becomes greater in diabetes, nephritis, and some other diseases. Thus the quantity of diastase enzyme in the blood is in direct proportion to the severity of the disease and this factor has been held to be a better control than the estimation of blood sugar. In diabetes, nephritis and various forms of anemia, the amount of fat in the blood increases with the gravity of the ailment. With the aid of the nephelometer, it is now possible to measure accurately small quantities of fat in the blood and this test is now of direct value in diagnosis. The nephelometer, which was formerly used mostly in research work, therefore has now a practical value in the medical laboratory. Its use has also made possible marked advances in our knowledge of fat metabolism. Both these tests have lately been installed in the Battle Creek Sanitarium and have been found of especial value in cases of diabetes.

### WORK WITH HOOVER AND SERVE OAT FOOD

#### "Wheatless Meal" a patriotic Duty—Oats High in Energy Value and Low in Price

To sustain our Allies and our own army abroad it is necessary for this country to ship to Europe 200,000,000 bushels of wheat the coming year, in place of a normal shipment of 80,000,000 bushels. That is why Herbert Hoover says we must eliminate waste of bread and must have one "Wheatless meal" each day. It is impossible to view this matter as other than a patriotic duty.

Yet the domestic housewife must look to the matter of serving nourishing meals. An excellent food to consider as a flavory, nutritious, and easily prepared substitute for bread is oats, either in the form of oatmeal or oatmeal biscuits. As a food that imparts vim, energy, and endurance, oats have long been recognized as supreme. And in the form in which they can in these days be procured for table use, they excel nearly every other grain food in flavor and ease of preparation.

Again, oats have advanced little in price, whereas nearly all other foods have soared. Prices on Quaker Oats—the product of the Quaker Oats Company of Chicago—for example, have advanced, on the smaller package only from 10 cents to 12 cents, and on the large, only from 25 cents to 30 cents. Most other foods, for the same nutrition cost from twice to ten times as much. Even so simple a diet as bread and milk, for the same nutrition, today costs twice as much as oatmeal. The average mixed diet costs four times as much.

It has been estimated by food experts that oats, to the extent that they are used in place of other foods, on the table, represent a lower cost by 75 per cent, on the average, than what they take the place of.

A few specific comparisons may be interesting to the reader: Per unit of nutrition, bacon and eggs cost five times as much as oatmeal steak and potatoes cost five times as much, chicken costs six times as much, the average mixed diet four times as much.

In view of the critical food situation and the comparatively low cost of this superior food, the housewife, it appears, would do well to serve oats more often.

### COUNCIL ON PHARMACY AND CHEMISTRY

During August the following articles have been accepted by the Council on Pharmacy and Chemistry for inclusion with New and Nonofficial Remedies:

**Calco Chemical Company:** Betanaphthol Benzoate-Calco.

**The Diarsenol Company Limited:** Neodiarsenol Ampoules, 0.15 gm.; Neodiarsenol Ampoules, 0.3 gm.; Neodiarsenol Ampoules, 0.45 gm.; Neodiarsenol Ampoules, 0.6 gm.; Neodiarsenol Ampoules, 0.75 gm.; Neodiarsenol Ampoules, 0.9 gm.

**Fairchild Bros. and Foster:** Gastron.

**Hoffmann-LaRoche Chemical Works:** Tyramine-Roche.

**Maltbie Chemical Company:** Calcreose, Calcreose Solution, Calcreose Tablets, 4 grains.

### NEW AND NONOFFICIAL REMEDIES

**Neodiarsenol.**—Neodiarsenol has the composition, physical and chemical properties and action, uses and dosage as given for neosalvarsan in New and Nonofficial Remedies, 1917. Neodiarsenol is supplied in ampules containing, respectively, 0.15, 0.3, 0.45, 0.6, 0.75 and 0.9 gm., neodiarsenol. Neodiarsenol is accepted for New and Nonofficial Remedies, as the available supply of neosalvarsan seems to be insufficient to meet the demand, and this preparation conforms to the rules of the Council. Neodiarsenol is made in Canada under a license issued by the Commissioner of Patents of Canada. The Farbwerke-Hoechst Company holds the sale of neodiarsenol in the United States an infringement of its rights, and has stated that all violations of its rights will be prosecuted. The Diarsenol Company Limited, Toronto, Canada (*Jour. A. M. A.*, Aug. 4, 1917, p. 383).

**Gastron.**—A solution of the gastric tissue juice obtained by direct extraction from the mucosa of the fresh stomach of the pig. It contains 25 per cent., by weight of glycerin, 0.25 per cent. absolute hydrochloric acid, and 1 cc. is capable of dissolving 200 gm. of coagulated egg albumin. Gastron is designed for use in disorders of gastric function. Fairchild Bros. and Foster, New York (*Jour. A. M. A.*, Aug. 25, 1917, p. 645).

### PROPAGANDA FOR REFORM

**Standardization of Serums and Vaccines.**—The misunderstandings and difficulties as regards the standardization of serums and vaccines are pointed out by G. W. McCoy, Director of the U. S. Hygienic Laboratory. So far legal standards have been formulated only for diphtheria and tetanus antitoxin. A tentative standard for antityphoid vaccine has been devised. This completes the list of standardized biologic products. Though not standardizable, vaccine virus and antirabic virus are tested for potency in the process of manufacture. McCoy reviews the work which has been done in the attempt to work out and standardize other biologic products, and brings out the many difficulties which are in the way (*Jour. A. M. A.*, Aug. 4, 1917, p. 378).

**Bile, a Cholagogue.**—The view that bile absorbed from the alimentary tract increases the secretion of bile, and thus acts as a true cholagogue, seems to be established. The feeding of fresh bile to bile fistula dogs causes an almost constant cholagogue action. The bile of the dog, sheep and pig all have this effect, and ox bile seems to be the most active cholagogue. Of the bile constituents, glycocholic acid has a moderate cholagogue effect, but usually causes a great drop in bile pigment output in a bile fistula dog; taurocholic acid has a strong cholagogue action, but little inhibiting effect on bile pigment secretion; the bile fat has no influence on bile flow, but causes inhibition of bile pigment secretion; cholic acid has little effect on bile flow but may decrease the bile pigment output (*Jour. A. M. A.*, Aug. 4, 1917, p. 386).

**Administration of Agar.**—O. H. Brown and W. O. Sweek favor the administration of agar in the form of a hot lemonade, chocolate or bouillon. For the preparation of a lemonade they direct to take 2 heaping tablespoonfuls of the agar powder, flakes or shreds; add to 1 quart of water, and boil till the agar is thoroughly liquified; sweeten and add juice of one lemon; then drink the entire quart while hot. They suggest that the quart of hot agar lemonade may be prepared in the morning, poured into a vacuum bottle, and taken leisurely during the day. They find that patients prefer to make use of orange, grapefruit, vanilla, maple or other flavoring in place of the lemon (*Jour. A. M. A.*, Aug. 11, 1917, p. 467).

**Trimethol.**—The Council on Pharmacy and Chemistry concludes that the claims for Trimethol are unsupported by acceptable evidence, and has declared Trimethol and the pharmaceutical preparations said to contain it—Trimethol Syrup, Trimethol Capsules and Trimethol Tablets—sold by Thos. Leeming and Co., New York, ineligible for New and Nonofficial Remedies. The Trimethol preparations are advertised for use in all conditions dependent on intestinal putrefaction, and some of the advertising claims give to "Trimethol" the scope of a panacea. A request for Trimethol having been refused by the manufacturers, the Council's bacteriologist examined one of the pharmaceutical preparations said to contain it. Although the preparation was found to be a germicide, the examination did not indicate that Trimethol had any remarkable potency or other properties suggesting that it possessed special therapeutic value (*Jour. A. M. A.*, Aug. 11, 1917, p. 485).

**Iodine Ointments.**—An examination of iodine ointments made in the A. M. A. Chemical Laboratory by L. E. Warren demonstrated that when made according to the method of the U. S. Pharmacopoeia (dissolving iodine in potassium iodide and glycerine and then incorporating with benzoinated lard), about 20 per cent. of the free iodine used combines with the ointment base. On standing for a month a further quantity of 5 per cent. goes into combination, and after this no further loss of iodine occurs. The composition of iodine ointment, U. S. P., after a month or more is approximately: free iodine, 3 per cent.; iodine combined with fat, 1 per cent.; potassium iodide, 4 per cent.; benzoinated lard (containing combined iodine) 80 per cent. The U. S. Pharmacopoeia requirement that iodine ointment shall be freshly prepared appears to be unnecessary. It was also found that if iodine ointment is made without the addition of potassium iodide, practically all of the free iodine enters into combination with the fat (*Am. Jour. Pharm.*, Aug. 1917, p. 339).

**Some Miscellaneous Nostrums.**—Limestone Phosphate is devoid of limestone. It is a mixture of sodium bicarbonate and sodium acid phosphate, which when dissolved in water yields the ordinary sodium phosphate. Parmint, according to the advertising, should be used for the treatment of catarrhal deafness, head noises, catarrh of the stomach, catarrh of the bowels, loss of smell, lung trouble, asthma, bronchitis, etc. Parmint appears to be an alcoholic solution containing sugar, glycerin, a small amount of chloroform and a mixture of volatile oils with oil of anise predominating. Varnesis is a "rheumatism cure" which, when analyzed some time ago, was found to contain less than 1 per cent. vegetable extractives chiefly derived from emodin—yielding drugs and capsicum. Takin according to directions, its user consumes as much alcohol as he would obtain from the consumption of a half pint of raw whisky every four and one half days. Fruitatives is sold under a meaningless statement of composition and with claims that suggest it to be a cure for paralysis, consumption, rheumatism, etc. It is probable that Fruitatives possesses no virtues not found in aloin, belladonna and strychnine pills (*Jour. A. M. A.*, Aug. 18, 1917, p. 582).



**Serum Treatment of Pneumonia.**—Rufus Cole reports that one third of the cases of pneumonia are due to Type I pneumococci, one third to Type II pneumococci, from 10 to 15 per cent. to Type III, and the remainder to pneumococci belonging to the fourth group. The mortality from infection with Type I and Type II are of average severity with a mortality of from 25 to 30 per cent.; those from Type III are severe and more than one half of the patients die from this infection, while the mortality from Group IV is only about 10 to 15 per cent. Anti-pneumococcic serum is efficient only in infection from Type I, and Cole has come to the conclusion that the serum should be administered only after it has been determined that the infection is due to this type. He reports that certain commercial serums have been found inefficient or without effect against Type I infection. He also reports his experience with commercial serums which were inefficient or inert. It is expected that the U. S. Public Health Service will soon establish a method for the standardization of anti-pneumococcic serum (*Jour. A. M. A.*, Aug. 18, 1917, p. 505).

**Some Miscellaneous Nostrums.**—Newspapers advertise Swift's Sure Specific for the treatment of "rheumatism" and "impure blood". The advertising matter sent out by its promoters recommends "S. S. S." for the self-treatment of syphilis. No information is offered in regard to the composition of "S. S. S." except that it contains 15 per cent. alcohol and the claim that it is "made from purely vegetable ingredients". Kaufmann's Sulphur Bitters are claimed to contain sulphur, gentian, wild cherry, aloes, eupatorium, "Tanacetum", hahnony, podophyllum, "Senna Indica", calamus. It was sold as a remedy for scrofula, catarrh, salt rheum, rheumatism, etc., but the government declared these curative claims false and fraudulent (*Jour. A. M. A.*, Aug. 25, 1917, p. 663).

**Treatment with Vaccines.**—The conditions—self-limited infections and chronic infectious processes—in which vaccine treatment has been employed make it exceedingly difficult to determine if vaccines are of value. As pointed out by J. P. Leake of the U. S. Public Health Service, whenever the use of vaccines in a certain disease has been carefully controlled, its use has been found of little value. This is true of whooping cough, typhoid fever and gonorrheal vulvovaginitis and probable in pyorrhea alveolaris. As for the strikingly favorable results in individual instances which are reported by vaccine enthusiasts and repeated in advertisements, these may all be matched by equally brilliant results in cases not treated with vaccines (*Jour. A. M. A.*, Aug. 25, 1917, p. 648).

**Nasopharyngeal Disinfection by Hypochlorites.**—While the practical sterilization of infected wounds by means of hypochlorites has been effected, the sterilization of the nose and throat is far more difficult, especially in the case of diphtheria and meningococcus carriers. Encouraging results from the use of a hypochlorite substitute, dichloramine-T, have been reported, but these require confirmation (*Jour. A. M. A.*, Aug. 25, 1917, p. 651).

## NEW BOOKS

### TREATISE ON REGIONAL SURGERY

Edited by Dr. John Fairbairn Binnie, A. M., C. M., F. A. C. S., Kansas City, Mo., Volume 1, with 351 illustrations. Cloth, 652 pages. Price \$7.00. P. Blakiston's Son and Co., Philadelphia, Publishers.

In addition to the favorably well known work of Dr. Binnie, which the writer has always held to be unsurpassed in the field of operative surgery, this volume has the enhanced value of contributions from Clarence A. McWilliams, James Hogarth Pringle, J. E. Summers, Sir H. L. Maitland, Joseph L. Goodale, Lee M. Hurd, J. E. Thompson, Max A. Goldstein, Chevalier Jackson, Chas. H. Mayo, Sam Robinson and J. C. Bloodgood, each man an authority in his special line. The volume considers the head, bronchial system, thorax and the breast and the articles strive to handle the problems presented in the regions enumerated. Naturally much of the matter is that not ordinarily found in works on general surgery and reflect the findings at operation of the various writers in the experiences.

The volumes to follow will contain matter on (II) the abdomen, the genito-urinary system and the spine; (III) the upper extremity, the lower extremity, the thoracic walls, lungs and pleurae.

We believe this to be a most useful work to the surgeon, who after being well-grounded in the principles of surgery is called to handle many difficult problems not often enough encountered to give the necessary familiarity with the matter. Dr. Binnie's thoroughness and mastery of detail is evidenced in his own articles as well as in those of the men selected to contribute their views.

### THE INTERNAL SECRETIONS

Their Physiology and Application to Pathology, by E. Gley, M. D., member of the Academy of Medicine, Paris; Professor of Physiology in the College of France, etc. Translated from the French and edited by Maurice Fishberg, M. D., Clinical Professor of Medicine, New York University and Bellevue Hospital Medical College; Attending Physician, Montefiore Home and Hospital for Chronic Diseases, Cloth, 241 pages. Price \$2.00. Paul B. Hoeber, Publisher, New York.

The mystery surrounding the effect of the internal secretions, their tendency to produce much of the phenomena known as the abnormal or disease, upon derangement, by either over or under pro-

duction, is becoming more interesting as time goes on. Much good is being done in internal medicine by the ability of the internist to ingeniously replace lost production or check over production in the internal secretions. The study is now in the progressive stage, each month or year producing something new to clear up what was formerly shrouded in mystery and speculation. Works on the subject are necessarily rare. This one is an excellent contribution and should appeal to those interested in internal medicine.

#### ANNALS OF MEDICAL HISTORY

Paul B. Hoeber, Publisher, New York, announces that soon *The Annals of Medical History* will make its appearance. The new publication will be issued quarterly, edited by Francis R. Packard, M. D., the editorial offices being at 302 South 19th St., Philadelphia. It is said this is the only publication in English devoted solely to the History of Medicine, a subject in which physicians are becoming more and more interested.

#### HANDBOOK ON GYNECOLOGY

##### For Students and Practitioners

By Henry Foster Lewis, A. B., M. D., Professor and Head of Department of Obstetrics and Gynecology in Loyola University School of Medicine; Chief of Obstetric Staff of Cook County Hospital; Fellow and Ex-President of the Chicago Gynecological Society; Late Assistant Professor of Obstetrics and Gynecology in Rush Medical College (in Affiliation with the University of Chicago), and Alfred de Roulet, B. Sc., M. D., Professor of Gynecology in Loyola University School of Medicine; Attending Gynecologist to the House of the Good Shepherd, and to St. Bernard's Hospital; Obstetrician and Chief of Staff of St. Margaret's Home and Hospital. 177 illustrations. Cloth. Price \$4.00. C. V. Mosby Company, St. Louis.

The authors state they primarily intend this volume for the use of the student and practitioner, and they have borne this limitation in mind in the preparation, which excludes much of the voluminous matter often found in gynecologies and of interest more as rarities than particular necessities in the daily work of the practitioner. First principles naturally come in for consideration. The illustrations are in the main original. The volume is very creditable and fits the purpose for which intended.

#### PRACTICAL MEDICINE SERIES

**Eye, Ear, Nose, and Throat, Volume 3.** The Eye, edited by Casey A. Wood, M. D., Chicago; The Ear, by Albert H. Andrews, M. D., Chicago; The Nose and Throat, by George E. Shambaugh, M. D. Illustrated. Cloth, 372 pages. Price \$1.50. The Year Book Publishers, 1917, 608 South Dearborn St., Chicago.

**Gynecology, Volume 4.** Edited by Emilius C. Dudley, A. M., M. D., Chicago, and Sydney S. Schochet, M. D., Chicago. Illustrated. Cloth, 332 pages. Price \$1.35. The Year Book Publishers, 1917, 608 South Dearborn St., Chicago.

**Pediatrics and Orthopedic Surgery, Volume 5.** Pediatrics, edited by Isaac A. Abt, M. D., and A. Levinson, M. D., Chicago. Orthopedic Surgery, edited by John Ridlon, M. D., and Charles A. Parker, M. D., Chicago. Illustrated. Cloth, 240 pages. Price \$1.35. The Year Book Publishers, 1917, 608 South Dearborn St., Chicago.

#### THE SURGICAL CLINICS OF CHICAGO

*The Surgical Clinics of Chicago, Volume I, Number III (June 1917).* Octavo of 231 pages, 70 illustrations. Philadelphia and London: W. B. Saunders Company, 1917. Published Bi-Monthly. Price per year: Paper \$10.00, Cloth \$14.00.

This volume is a continuation of the very able work begun in February, 1917, and is profusely illustrated with originals.

Dr. N. M. Percy, Augustana Hospital, contributes a beautifully illustrated article on "Resection of the Stomach for Carcinoma"; Dr. Dallas B. Phenister on "Reconstruction of the Hepatic Duct," certainly a badly needed maneuver in the occasional rare cases met after gall-bladder surgery; Dr. Vernon C. David presents "Local Anesthesia for Hemorrhoidectomy," a process which may often be used to advantage, thus avoiding the risk incident to general anesthesia; Dr. Carl Beck has "Treatment of Obstinate Sciatica" by the application of plaster cast to the limb in extreme extension, followed by elevation, etc.; Dr. Frederick A. Besley presents articles on "Regional Surgery", including diseases of the chest wall, including the pleura and breast; Dr. Carey Culbertson presents "Therapeutic Abortion and Sterilization". There are many other splendid contributions to the volume, all worthy of special mention, but limited space prohibits calling attention to all the good things contained.

#### THE TREATMENT OF EMERGENCIES

*The Treatment of Emergencies.* By Hubley R. Owens, M. D., Surgeon to the Phila. General Hospital; Asst. Surgeon to the Phila. Orthopedic Hospital and Infirmary for Nervous Diseases. Chief Surgeon to the Phila. Police and Fire Bureaus; Asst., Surgeon Medical Reserve Corps, U. S.

Navy. 12mo volume of 350 pages with 249 illustrations. Philadelphia and London, W. B. Saunders Company, 1917. Cloth \$2.00 net.

This compact little volume may well be termed a condensed surgery, containing the essentials for the successful treatment of conditions found in emergency work. It comprises First Aid, Contusions and Wounds, Hemorrhage, Sprains and Dislocations, Burns and Scalds, Effect of Heat and Cold on Tissues, Asphyxiation, Drowning, Convulsions, Unconsciousness, Effects Produced by Lightning, Foreign Bodies, Antiseptics, Bandaging, Transportation, Poisons and Antidotes and Household Remedies.

The text is copiously and well illustrated, mostly original work. The volume is worthy of a place on the physician's desk.

#### DIAGNOSIS FROM OCULAR SYMPTOMS.

By Matthias Lancton Foster, M. D., F. A. C. S., member of the American Ophthalmological Society, Ophthalmic Surgeon to the New Rochelle Hospital, First Lieutenant in the Medical Reserve Corps, United States Army. Rebman Company, New York.

This book, as the title indicates, is intended as an aid in diagnosis. An attempt is made to group prominent symptoms which may be common to a number of diseases in such a way as to make clear the points of difference: for instance, under the head of secondary glaucoma, the dilated pupil is compared to that caused by diphtheritic paralysis, lead or ptomaine poisoning, syphilis, contusion, lesion of the oculomotor nerve and instillation of a mydriatic. There is little in the book that cannot be found in the ordinary text book on ophthalmology, but its arrangement offers some advantages especially to the student.

Fullenwider.

#### BOTULISM

E. C. Dickson, San Francisco (*Journal A. M. A.*, Sept. 22, 1917), has collected the statistics of epidemics of food poisoning which he thinks is more frequent than is diagnosed. It is possible that many outbreaks are passed without recognition. An important feature in the recorded cases in this country and in those which he has collected, is the relatively small number in which food of animal origin has been the cause. In eighteen outbreaks where the source of the poisoning was found only 7 were traced to animal food while 11 were traced to home or commercially canned vegetables. In Dickson's experiments with four strains of *B. botulinus* he has found that this toxin can be found in a considerable number of vegetables and fruits and he has experimented with the cold packing system, proving its presence in many vegetables thus prepared. In view of the world's shortage of food and the widespread advice given for the making of home canned victuals he thinks there is a possible danger. The botulism toxin is easily destroyed by heating and all danger of botulism will be removed from home canned products if the food is always boiled before eaten or tasted. Home canned vegetables which have been prepared by the cold pack method should therefore be served as salad without cooking and it will be safer to reheat all fruit and vegetables that have been prepared by this method even if there is no sign that they have been spoiled.

#### FOR SALE—EXCHANGE

**SPECIALIST'S OFFICE EQUIPMENT FOR SALE.**—Mrs. C. B. Clarke, 119 D St. N. W., Ardmore, announces that she has for sale the office equipment of her husband, Dr. C. B. Clarke, deceased. The office equipment in its entirety is modern and up-to-date in every respect. Those contemplating purchasing such supplies should write Mrs. Clarke.

**ESTABLISHED PRACTICE FOR PRICE OF OFFICE EQUIPMENT.** I have a well established practice in a live southern Oklahoma town and wish to specialize. I want some live doctor to take my place for the price of my office outfit. Will sell residence if desired. Address A. B. C., care Journal.



## OFFICERS OF COUNTY SOCIETIES

County	President	Secretary
Adair .....	J. Patton, Stilwell	A. J. Sands, Watts
Alfalfa .....	S. B. Growden, Cherokee	L. T. Lancaster, Cherokee
Atoka .....		
Beaver .....		
Beckham .....	J. E. Yarrrough, Erick	K. R. Rone, Elk City
Blaine .....	M. W. Buchanan, Watonga	J. A. Norris, Okeene
Bryan .....	J. H. Shuler, Durant	D. Armstrong, Mead
Caddo .....	W. T. Hawn, Binger	C. R. Hume, Anadarko
Canadian .....	P. F. Herod, El Reno	W. J. Muzzy, El Reno
Choctaw .....	V. L. McPherson, Boswell	E. R. Askew, Hugo
Carter .....	J. C. Best, Ardmore	R. H. Henry, Ardmore
Cleveland .....	J. M. Williams, Norman	Gayfree Ellison, Norman
Cherokee .....	W. B. Blake, Tahlequah	C. A. Peterson, Tahlequah
Custer .....	M. C. Comer, Clinton	S. C. Davis, Clinton
Comanche .....	L. A. Milne, Lawton	G. Pinnell, Lawton
Coal .....	J. B. Clark, Coalgate	A. Cates, Tupelo
Cotton .....	M. T. Clark, Walters	G. O. Wehb, Temple
Craig .....	C. S. Neer, Vinita	W. R. Marks, Vinita
Creek .....	C. D. Blachley, Drumright	H. S. Garland, Sapulpa
Dewey .....		
Ellis .....		
Garfield .....	W. L. Kendall, Enid	James H. Hays, Enid
Garvin .....	G. L. Johnson, Pauls Valley	N. H. Lindsey, Pauls Valley
Grady .....	E. L. Dawson, Chickasha	Martha Bledsoe, Chickasha
Grant .....		C. H. Lockwood, Medford
Greer .....	E. M. Poer, Mangum	T. J. Horsley, Mangum
Harmon .....		J. B. Hollis, Hollis
Haskell .....	M. VanMatre, Keota	J. R. Waltrip, Kinta
Hughes .....		
Jackson .....	D. C. Buck, Eldorado	W. H. Rutland, Altus
Jefferson .....	G. C. Wilton, Ryan	J. I. Derr, Waurika
Johnson .....	C. B. Ballard, Mannsville	H. B. Kniseley, Tishomingo
Kay .....		A. S. Risser, Blackwell
Kingfisher .....	C. E. Wagoner, Hennessey	Chas. W. Fisk, Kingfisher
Kiowa .....	Wm. McIlwain, Lone Wolf	A. L. Wagoner, Hobart
Latimer .....		E. B. Hamilton, Wilburton
Le Flore .....	J. B. Beckett, Spiro	G. A. Morrison, Poteau
Lincoln .....		A. M. Marshall, Chandler
Logan .....	A. A. West, Guthrie	E. O. Barker, Guthrie
Love .....		
Mayes .....	J. E. Hollingsworth, Strang	W. C. Bryant, Choteau
Major .....		
Marshall .....	A. E. Ballard, Madill	O. E. Wellhorn, Kingston
McClain .....	J. W. West, Purcell	O. O. Dawson, Wayne
McCurtain .....	A. S. Graydon, Idabel	C. R. McDonald, Broken Bow
McIntosh .....	N. P. Lee, Checotah	Wm. A. Tolleson, Eufaula
Murray .....	J. A. Adams, Sulphur	W. H. Powell, Sulphur
Muskogee .....	I. B. Oldham, Muskogee	J. G. Noble, Muskogee
Noble .....		T. F. Renfrow, Billings
Nowata .....	J. E. Brookshire, Nowata	J. R. Collins, Nowata
Okfuskee .....	H. A. May, Okemah	J. M. Pemherton, Paden
Oklahoma .....	L. J. Moorman, Oklahoma City	F. B. Sorgatz, Oklahoma City
Okmulgee .....	N. N. Simpson, Henryetta	H. E. Breese, Henryetta
Ottawa .....	R. F. Von Cannon, Miami	G. P. McNaughton, Miami
Osage .....	J. M. Ennis, Pawhuska	Benj. Skinner, Pawhuska
Pawnee .....		E. T. Robinson, Pawnee
Payne .....	E. M. Harris, Cushing	J. B. Murphy, Stillwater
Pittsburg .....	J. O. Gruhbs, N. McAlester	J. C. Johnston, McAlester
Pottawatomie .....	J. H. Scott, Shawnee	G. S. Baxter, Shawnee
Pontotoc .....	C. L. Orr, Ada	M. L. Lewis, Ada
Pushmataha .....		
Rogers .....	W. E. Smith, Collinsville	W. A. Howard, Chelsea
Roger Mills .....	W. S. Wimberly, Hammon	Lee Dorrah, Hammon
Seminole .....		W. L. Knight, Wewoka
Sequoyah .....	S. B. Jones, Sallisaw	T. E. Wood, Sallisaw
Stephens .....	E. B. Thomason, Velma	J. M. Nieweg, Duncan
Texas .....	W. H. Langston, Guymon	R. B. Hays, Guymon
Tulsa .....	A. W. Roth, Tulsa	W. Forest Dutton, Tulsa
Tillman .....	A. J. Hays, Frederick	J. E. Arrington, Frederick
Wagoner .....	F. W. Smith, Wagoner	S. R. Bates, Wagoner
Washita .....	D. W. Bennett, Sentinel	A. S. Neal, Cordell
Washington .....	W. E. Rammel, Bartlesville	J. G. Smith, Bartlesville
Woodward .....	Ralph Workman, Woodward	C. W. Tedrowe, Woodward
Woods .....	Isaac Hunt, Freedom	D. B. Ensor, Hopeton

## OFFICERS OF OKLAHOMA STATE MEDICAL ASSOCIATION.

Meeting Place—Tulsa, May, 1918.

President, 1917-18—Dr. W. Albert Cook, Tulsa.

President-elect, 1918-19—Dr. L. S. Willour, McAlester.

1st Vice-President—Dr. McLain Rogers, Clinton.

2nd Vice-President—Dr. G. F. Border, Mangum.

3rd Vice-President—Dr. Horace Reed, Oklahoma City.

Secretary-Treasurer-Editor—Dr. C. A. Thompson, Muskogee.

Delegate to the A. M. A., 1918-19—Dr. Chas. R. Hume, Anadarko.

Delegate to the A. M. A. 1917-18—Dr. M. A. Kelso, Enid.

## COUNCILOR DISTRICTS.

1. Cimarron, Texas, Beaver, Harper, Ellis, Woods and Woodward; Councilor, Dr. J. M. Workman, Woodward. Term expires 1919.
2. Roger Mills, Beckham, Dewey, Custer, Washita and Blaine; Councilor, Dr. Ellis Lamb, Clinton. Term expires 1920.
3. Harmon, Greer, Jackson, Kiowa, Tillman, Comanche and Cotton; Councilor, Dr. G. P. Cherry, Mangum. Term expires 1918.
4. Major, Alfalfa, Grant, Garfield, Noble and Kay; Councilor, Dr. G. A. Boyle, Enid. Term expires 1919.
5. Kingfisher, Canadian, Oklahoma and Logan; Councilor, Dr. Fred Y. Cronk, Guthrie. Term expires 1918.
6. Caddo, Grady, McClain, Garvin, Stephens and Jefferson; Councilor, Dr. C. M. Maupin, Waurika. Term expires 1919.
7. Osage, Pawnee, Creek, Okfuskee, Okmulgee and Tulsa; Councilor, Dr. N. W. Mayginnies, Tulsa. Term expires 1920.
8. Payne, Lincoln, Cleveland, Pottawatomie and Seminole; Councilor, Dr. H. M. Williams, Wellston. Term expires 1920.
9. Pontotoc, Murray, Carter, Love, Marshall, Johnston and Coal; Councilor, Dr. J. T. Slover, Sulphur. Term expires 1918.
10. Washington, Nowata, Rogers, Craig, Ottawa, Mayes and Delaware; Councilor, Dr. R. L. Mitchell, Vinita. Term expires 1918.
11. Wagoner, Muskogee, McIntosh, Haskell, Cherokee and Adair; Councilor, Dr. J. Hutchings White, Muskogee. Term expires 1920.
12. Hughes, Pittsburg, Latimer, LeFlore and Sequoyah; Councilor, Dr. Ed. D. James, Haileyville. Term expires 1920.
13. Atoka, Pushmataha, Bryan, Choctaw and McCurtain; Councilor, Dr. J. L. Austin, Durant. Term expires 1920.

## CHAIRMEN OF SCIENTIFIC SECTIONS.

Surgery and Gynecology—Dr. LeRoy Long, Oklahoma City.

Pediatrics and Obstetrics—Dr. T. C. Sanders, Shawnee.

Eye, Ear, Nose and Throat—Dr. L. A. Newton, Oklahoma City.

General Medicine, Nervous and Mental Diseases—Dr. A. B. Leeds, Chickasha.

Genitourinary, Skin and Radiology—Dr. W. J. Wallace, Oklahoma City.

Legislative Committee—Dr. Millington Smith, Oklahoma City; Dr. J. M. Byrum, Shawnee; Dr. W. T. Salmon, Oklahoma City.

For the Study and Control of Cancer—Drs. LeRoy Long, Oklahoma City; Gayfree Ellison, Norman; D. A. Myers, Lawton.

For the Study and Control of Pellagra—Drs. A. A. Thurlow, Norman; L. A. Mitchell, Frederick; J. C. Watkins, Checotah.

For the Study of Venereal Diseases—Drs. Wm. J. Wallace, Oklahoma City; Ross Grosshart, Tulsa; J. E. Bercaw, Okmulgee.

Necrology—Drs. Martha Bledsod, Chickasha; J. W. Pollard, Bartlesville.

Tuberculosis—Drs. L. J. Moorman, Oklahoma City; C. W. Heitzman, Muskogee; Leila E. Andrews, Oklahoma City.

Conservation of Vision—Drs. L. A. Newton, Oklahoma City; L. Haynes Buxton, Oklahoma City; G. E. Hartshorne, Shawnee.

First Aid Committee—Drs. G. S. Baxter, Shawnee; Jas. C. Johnston, McAlester.

Committee on Medical Education—Drs. A. L. Blesh; A. K. West; A. W. White, Oklahoma City.

State Commissioner of Health—Dr. John W. Duke, Guthrie, Oklahoma.

## STATE BOARD OF MEDICAL EXAMINERS.

J. J. Williams, President, Weatherford; R. V. Smith, Secretary, Tulsa; M. Gray, Vice-Pres., Mountain View; O. R. Gregg, Trecas, Freedom; W. T. Ray, Gould; H. C. Montague, Muskogee.


Reciprocity with Georgia, Kentucky, Mississippi, Nevada, North Carolina, Wisconsin, Kansas, Arkansas, Virginia, West Virginia, Nebraska, New Mexico, Tennessee, Iowa, Ohio, California, Colorado, Indiana, Missouri, New Jersey, Vermont, Texas, Michigan.

Meetings held second Tuesday of January, April, July and October, Oklahoma City.

Address all communications to the Secretary, Dr. R. V. Smith, Daniel bldg., Tulsa.

# THE JOURNAL

of the



## Oklahoma State Medical Association

VOLUME X

MUSKOGEE, OKLA., NOVEMBER, 1917

NUMBER 11

### METASTASES.\*

S. H. LANDRUM, M. D., Altus, Okla.

There is so much to be learned that no man should be censured for failure to learn it all. If the writer of this waif of thought had tried harder and loafed less he could have known a great deal more than he now thinks he knows. This may sound like boasting, but he gives you his word that it is not. However that may be, there is yet something for all of us to learn and it is never too late.

We wish today to call your attention merely to some things that we are not sure of, along of course with some other things that have been fairly well proved. We wish to present the phenomenon of metastasis, allowing to this term its broadest meaning. The nomenclature of pathology has for centuries been hopelessly chaotic. It is little better now than it was in Shakespeare's time. We hide behind the suffix, "itis," when we are in doubt as to the nature of an infection. "Ism" serves also as an efficient buffer between the hard pressed doctor and the inquisitive layman. It was found years ago, long before Koch's epoch making discovery, that following an infection of the urethra there frequently appeared joint involvement.

If anywhere between eighteen and twenty-five days after a urethral infection there occurred inflammatory processes in a joint, especially in one joint only, the disease was given the more or less euphemistic name of rheumatism, the prefix gonorrheal being reserved for technical or pyrotechnical display.

If a patient after six or eight weeks of typhoid fever gradually developed a joint infection he had "rheumatism." If during the long drawn out course of chronic pulmonary tuberculosis the patient began to complain of his joints and had to have them packed in antiphlogistine, it was "rheumatism," of course.

If a man had a pair of submerged tonsils incapable of draining themselves, and a mouth full of rotten teeth stuck into soft, bleeding and stinking gums and should consult the doctor for a stiff joint or sharp pain in the neighborhood of a joint, there was no doubt that it was "rheumatism." If the patient had a nidus of infection somewhere up in his nose so that he might come with a diagnosis of "catarrh"; or if he had a chronic discharge from the ear and a painful joint it was beyond peradventure of a doubt "rheumatism."

If he had hemorrhoids with pruritus, and maybe a fistula with sciatic pain, it could not possibly be anything else than "rheumatism," with the clarifying and qualifying adjective, "sciatic," to make it sound more learned. In many instances the mere naming of the complaint was of small consequence because the origin of

\*Read at Medicine Park, Okla., May 9, 1917.



the infection was not known, and even now in many instances the nature of the disease is undetermined. The fact also of metastasis was well recognized, but the course and behavior of the process was not understood. We do not now know all about it, but enough to revolutionize the management of the condition popularly called rheumatism. We know for instance that there is no specific for its cure, not even "phylacogen," because we have it from good authority that there is no specific bacterium as a causal agent in the production of the symptoms. (*Arch. Int. Med.*, March, 1917). Previous loose habits in nomenclature are now to blame for our embarrassment in making up the literature of recent discoveries in pathology. It was once thought that malaria was due to vitiated atmosphere in damp and swampy places, hence the etymology of the word. Typhoid signifies nothing more than a low state of resistance, and the expression may be used to designate many other conditions of grave nature. So with rheumatism, biliousness, scarlet fever, erysipelas, grippe and many other diseased states, the origin of which we are still in ignorance.

Pain being the most tangible and the most frequent incentive for the patient to consult the doctor, naturally the doctor got the habit of naming the disease at the suggestion of the pain. Pain is usually manifest in the region of serous membranes like joint cavities, peritoneal surfaces, pericardial, endocardial, pleuritic and endocranial areas. It was discovered that quite frequently these infections were of such low grade that they did not go on to suppuration, and they were given the name of rheumatism, whether in the acute or chronic stage. No organism was found and no connection between an isolated primary focus elsewhere in the body was discovered.

We dwell thus long on the discussion of our old friend rheumatism because she has for so long been made to cover that numerous brood of metastatic complaints whose antecedents yet remain in doubt.

The problem of metastasis was stated with well nigh mathematical precision in most instances by the late John B. Murphy. One organ in the body may catch a disease from another just as one member of a family may catch an infection from another. The tonsil has been accused of infecting the appendix; the appendix has been charged with the pathology discovered in the gall bladder; the gall bladder has been blamed for instigating a general arthritis, and the colon bacillus has been demonstrated in a stomach ulcer. The cause has, however, often been mistaken for the effect, and vice versa. It now rests with modern methods to sweep away the confusion in our classification of disease.

There are certain areas from which infections are more readily distributed than from others. The fauces are probably the most important gateways to systemic infection. The accessory sinuses to the nose may here be included in this great danger zone. The next in importance are the gall bladder neck, the uterine cervix and the prostate. There are many other parts of the body which are prolific sources of low grade chronic infections, but I mention these because they represent an important type of infective atri. These foci are richly supplied by lymph channels leading to and supplying other organs from these sources. Infection in these areas is often characterized by rapid rise of temperature and not infrequently by the flooding of the circulating media with not only the toxins but also with myriads of bacteria as well. Emboli have their origin from these zones. Stray cells from malignant growths find their way into the blood or lymph stream and lodge elsewhere to set up business for themselves. Aseptic emboli course along to the terminals of vessels supplying joints and give to the literature that miserably incurable chronic complaint, for the want of a better name, called "rheumatoid arthritis." Such ports of entry and exit as the pylorus, the hilum of the liver, spleen, kidney, ovary, testicle and the uterine cervix represent the primary embryologic points where the body plumbing was installed. These traps should be diligently watched for obstructing alien agencies and for leaks.

Men whose ability can not be questioned have found that the infection com-

monly known as "acute articular rheumatism" may have its origin in a focus the excretions from which do not fairly represent the organism found at the point of complaint. It seems that from the investigations of these men the bacteria in their passage from one tissue to another undergo what may be termed "cultural changes," which is to say that the different culture media which they from time to time encounter bring about certain morphologic changes as well as chemical alterations that heretofore have effectively disguised them.

For instance, in a given case of chronic arthritis, even though the origin of the infection unquestionably lies in the tonsil or in a long standing gingivitis, a culture made from the tonsils or the gums does not appear to yield the same organism as one made from the joint. They may be different only in form, or in virulence, or in affinity for certain tissues. This explains why an "autogenous" vaccine made from the supposed infecting focus fails to relieve the patient. This is not the only reason for the failure of the vaccine to relieve, but that is another and a longer story.

This much has been determined: The character of the infecting organism, its morphology, its virulence, its selective affinity for certain tissues, undergoes remarkable changes both during its stay within the original nidus of proliferation, and on its metastatic journey to distant organs. The diplococcus or streptococcus rheumaticus of which we have read, differs widely from the staphylococcus or bacillus found in the excretions from an alveolar pyorrhea; or from the streptobacilli or other encapsulated bacteria found in an old submerged tonsil; or from the colon bacillus found in an infected gall bladder, stomach ulcer or kidney pelvis; or from the gonorrheal mixed infection dug up from the prostatic urethra, yet when the causative organism has been isolated and injected into an animal the characteristic disease represented has been reproduced. The cultivation of a given organism in a test tube is unlike the environment afforded while it proliferates in living tissue.

As in the beginning of this paper we stated that we have not yet learned it all; in fact, have been merely marking time or sawing with the back of the saw; the further we pursue the study of the various infections manifest in locally expressed symptoms, the more we see the necessity of the careful study of pathology and the primary beginnings of morbid processes. We may say that the principle of publicity can be applied as well to the cure of disease as to the cure of political evils. Publicity in the sense of uncovering the source and the analysis of the factors entering into the production of symptoms, and the running down of the offender and the exposure of his methods.

---

### PUBLIC HEALTH FACTORS.

C. E. North, New York (*Journal A. M. A.*, Oct. 13, 1917), says that, like other sciences, the science of public health has a background of philosophy, and the irrepressible conflict between the practical and academic is being fought out in this new realm. There are, on the one hand, those who consider that public health should deal only with the direct causes of disease. On the other hand there are those, of whom the author is one, who hold that the sentimental and esthetic sides of the subject should be considered. While they admit the importance of safety, they also claim that the desire for life is only a sentiment and that the enjoyment of life is just as important as life itself. They would not give up cleanliness and attractiveness even if these qualities are not absolutely essential, but would insist on them even if filth were not harmful, as is probably often the case. This principle, for example, is applied to the purity of the water supply. Infected water may be sterilized and made safe and may even show no signs of impurity, a certain amount of which might not be harmful, according to judicial opinions. But in the progress of the people toward better things, the toleration of harmless impurities is not altogether desirable. If public health includes anything more than the clement of safety, decency must also be considered.

## WOMEN AS INSURANCE RISKS.\*

J. S. HARTFORD, M. D., Oklahoma City, Okla.

Beginning some two decades ago there was a movement started among women to enter the commercial and professional fields of work. This movement has continued to grow and increase in influence and power until at the present time we find women competitors with men in nearly every line of endeavor. This movement has received a strong impetus forward by the present world wide war that has not only made women competitors of men but has placed them at the heads of families and business.

This new social condition has made necessary a study of women as insurance risks: as all banks and business firms now recognize the value of life insurance as a protection to credit, a protection to business and a protection to the family. Many insurance companies do not consider women as standard risks and most companies only write them special policies. The reason given is that we have never been able to accurately estimate the hazard of a woman during the child bearing period.

Woman's general physical make up is not unlike men, except that they weigh lighter and measurements are on an average lower, so that we must place the increased hazard to the diseases peculiar to the female sex.

There is a difference with companies as to the rating of spinsters and married women. On the whole we would consider a married woman thirty-two years of age who had given birth to children a better risk than a single woman of the same age that might marry and become pregnant later to undergo a severe and complicated labor, yet the hazard to a degree is lessened for the reason that only a small per cent of women who marry late in life becomes mothers.

We believe it is timely in this section to consider woman as post-operative risks and we desire to discuss this phase of the question on account of the large number of women that are being operated and increasing desire and expediency of women carrying insurance.

Certain operations are common in both sexes and as a rule when uncomplicated are considered on the same basis; namely, cholecystotomy, cholecystectomy, appendectomy and hernia cases.

The companies vary in their rating of gall bladder drainage and gall bladder removal; some companies refusing these cases altogether, others taking them after the operation at a period of from three to five years. We believe that the majority of companies consider the cholecystectomies the lessor hazard on account of the large number of cases of drainage that have subsequent operations for adhesions, and stones that were overlooked.

Uncomplicated cases of appendicitis, post-operative, are taken in from three months to twelve months; enough time should elapse to make the diagnosis certain. Non-operative cases, one attack, declined usually two years, two or more attacks declined five years. Hernias, post-operative, are taken by most companies about the same as appendectomies.

Goiters are always substandard risks and are so considered by most all companies. It is estimated by some of the leading actuaries that these cases should be rated as high as 150 per cent, and then only taken in younger ages. The companies that take these cases, either cystic or exophthalmic, following operation, delay granting insurance from three to ten years, and then only after all symptoms have cleared up.

In the discussion of this subject, at the American Life Convention of Medical Directors held in Excelsior Springs in March of this year, the point was brought out that in the United States this disease was most prevalent in the Great Lakes region and that it was present to a greater or less extent in a large per cent of women.

\*Read at Medicine Park, Okla., May 9, 1917.



One medical director in his discussion stated that he believed ten per cent of women around Cleveland, Ohio, showed signs of the disease.

Pregnant women are given special policies or declined until after the delivery. There are well founded reasons for refusing these cases, as we do not know and can have no way of estimating what will happen during the pregnancy and puerperum.

There is no question but the mortality from puerperal infection has greatly lessened in the last decade and each year shows a better record; but anyone who has examined a large number of insurance applications will be struck by the large number of women that have died from puerperal infection as reported in the family history. This is very noticeable in applications that come from the rural districts in this state, due, no doubt, to the prevalence a few years ago of care of these cases by untrained midwives.

It is estimated by the American experience table that the mortality of pregnant woman is 200 per cent.

Women who have had one or two abortions are declined by many companies without further considerations until the woman has given birth to a living child. We believe each one of these cases should be given individual study, as the question of habit abortion, syphilis and produced abortion must be taken into consideration before the question is decided; if not, many of these cases will be refused insurance that are rightly entitled to it. These points should always be brought out in the medical examination sent to the home office. Cases due to criminal abortion or syphilis will always be considered as undesirable risks, while in our opinion a single accidental abortion, everything else in good condition, ought not to deprive one of the benefit of protection.

In considering the question of pelvic operation, we have to make a closer study of the case than in any other abdominal operation.

In these cases, the things that are considered are the diagnosis, the hospital, the surgeon and the post-operative history. The diagnosis, because of the fact that practically all cases of pelvic infection that require major surgery become post-operative substandard risks. Cases in the early stages in which conservative surgery is done run the risk of secondary operations on the ovaries on account of disturbed circulation producing cysts, or remains of infections causing extension to adjacent organs.

Advanced cases of infection, where it is necessary to remove tubes and ovaries and possibly uterus, may be followed by adhesions with subsequent obstruction, partial or complete, and may also develop an artificial menopause with its accompanying train of nervous symptoms which may last for a period of years, rendering this class of cases as great hazards.

An operation done in a reputable hospital is apt to be done by a competent surgeon, and accurate record of the operation in detail is kept, as well as the post-operative history.

We believe that operation for repair of the perineum and the cervix, and the operations done for misplacements of the uterus, when carefully done, should not in any manner increase the hazard of the applicant, but on the other hand, after sufficient time has elapsed for recovery from the operation, those cases should be better risks than before on account of general improvement of health and removal of any injured tissue that subsequently might develop malignant growths.

We would especially call the attention of every surgeon doing surgery, of every hospital admitting cases, to the absolute necessity of accurate and careful histories of all cases operated; certainly a record of every step of the operation should be recorded at the time of the operation, and as far as possible the post-operative history should be recorded.

It is a duty we owe ourselves; a duty we owe our hospitals and above all a duty we owe our patients.

### Discussion.

**Dr. John Riley, Oklahoma City:** Dr. Hartford has a message in more ways than one; a message that interests the medical profession; that interests the community; that interests scientific men; that is, that the hospital and attending physician, in the interest of the future, in the interest of the hospital, must have a careful history of the patient; a careful physical diagnosis; a careful history of what was done after the operation, etc. With this information, the elevated standards of hospitals, we will conquer the problem of our medical science, and the uplifting of our practice in general, and hospitals should not be slow to take advantage of this very interesting information which the doctor has brought out relative to the insurance of women. The hospitals have the statistics that are carefully filed, and are accessible to the insurance agent or the hospital authorities. It is there for reference, not only for the physician himself, but for others who may be interested in this case.

**Dr. Willour, McAlester:** Sometime ago the medical director of one of our largest insurance companies was here and I asked him just what cases he would consider as good risks among women, and I asked him also if he did not have a pamphlet or something of that kind to use in these examinations. He said: "No, I have to absolutely place you between the insurance company and this risk;" so it resolves itself into that fact, and in order to do that we must have a complete history of what is done because we all know that 25 per cent of the cases do not know what has been done in the abdomen, and if they do not know and we do not know, they are undesirable risks. The other cases are girls coming along from seventeen to the age of twenty-five. These girls give a history of irregular menstruation and it is more or less embarrassing and we cannot get a clear history. These blanks come back a good many times before they are accepted. Just how to avoid that I have never been able to figure out. In the cases that have had any operative interference we have to get the history before we send it in.

**Dr. Hartford, closing:** I only wish to impress one particular thing, that is, as a medical director, the fact that bothers me most is that we are unable to get a clear and accurate history of the diseases that have occurred, or operations that have taken place in women. That prompted me to write this paper, for insurance work is an important work of every man writing it and every medical director.

### VOICE IMPAIRMENT IN TONSILLECTOMY.

From study of the physiology and anatomy of the soft palate and tonsil based on 161 tonsillectomized throats and a study of thirty cases of voice or other disturbance resulting from tonsillectomy Elmer L. Kenyon, Chicago (*Journal A. M. A.*, Sept. 1, 1917), offers the following conclusions in substance: In view of all the facts he brings forth the operation of tonsillectomy is in a serious situation as far as the medical public is concerned, unless by better technic or better skill the deformities it produces can be diminished. In removing the tonsillar capsule we take out an important supportive structure on which the normal physiologic action of the soft palate largely depends. The uncertainty of operative complications leading to increased deformities is inevitable, and danger to the speaking voice is, in the nature of the operative conditions, inevitable in an unknown percentage of cases while the danger to the singing voice begins long before that. Further intelligent efforts applied to technic and delicacy of procedure and possibility of greater care in lessening postoperative scar tissue are called for. Indiscriminate tonsillectomy on children or adults with singing voices of importance to their possessors is to take risks which the operator himself would not consent to take if appreciating the conditions. The weakness of the present professional attitude in favor of the exclusive employment of the extracapsular operation lies in the fact that no evidence exists proving that an operation aiming at a clean, complete intracapsular lymphidectomy, that is, complete removal of lymphatic tissue within the capsule, might not prove as capable of eliminating infective dangers as the extracapsular operation.

## DOUBLE UNDESCENDED TESTICLES: REPORT OF A CASE OPERATED AND RESULTS ELEVEN MONTHS AFTER.\*

FENTON M. SANGER, M. Sc., M. D., Oklahoma City, Okla.

The undescended testicle may be found inside the abdomen; at the internal ring; in the inguinal canal; or external to the canal, beneath the skin. Associated with this condition there is almost always associated a patent, vaginal process of peritoneum (the peritoneal sac containing the testes, and continuous with the peritoneal cavity) and therefore there is usually a condition of congenital hernia, either latent or actual. Dr. Bevan says these cases should be operated between the ages of six and twelve years.

The case I wish to report is a boy nearly nine years old. In infancy this child had a pronounced hernia on right side, so his mother said, and which she thought still existed.

Though she said a skilled surgeon had treated him when the boy was a baby, she was never told that the testes were undescended. Upon examination, I told her both testicles were undescended and that the only remedy and salvation of the child was an operation to make him a complete man in adult life.

I made an incision about three inches long on each side, from a point half an inch above the middle of Poupart's ligament, to the base of the scrotum. This incision divides the integument and the aponeurosis of the external oblique muscle. Then we seized the edges of the aponeurosis with forceps and well retracted them. This exposed the cremasteric fascia, which fills in the space between the lower edge of the internal oblique muscle (conjoined tendon) and Poupart's ligament. Going through this layer of fascia and the underlying transversalis fascia, we exposed the peritoneal pouch or sac, the vaginal process within which the testes were found. We incised this peritoneal pouch or sac and found we were within the vaginal process (or tunica vaginalis, and which was communicating with the peritoneal cavity). The testis on left side was laying in the inguinal canal up to internal ring. There being only a slight hernia on this left side. The right testis was about midway between the internal and external rings and had more developed hernia on this right side. The vaginal process on each side was divided just above the testicle and the upper portion of it peeled upward away from the structures that constitute the spermatic cord and which lie beneath it: we then transfixed this vaginal process with the needle and tied it high up with catgut ligature, after reducing the hernia in each vaginal process. It should be remembered to tie this portion of the sac upon the point of the finger placed within it, just as in tying off any portion of gut or omentum, which might have entered this sac. Next we applied a pursestring suture to the distal portion of the sac and tied the testicle within this. This included the testicle within that part of the vaginal process that corresponds to the normal tunica vaginalis. We then lifted the testes out of their beds. They were bound close by tense, short bands of connective tissue, and spermatic vessels which were torn across with ordinary forceps. These spermatic vessels may be severed without any damage, leaving the vas and its vessels. Then we stripped the cord of all surrounding fascia and connective tissue, which left nothing but the vas deferens and its vessels. This part of the operation must be done with due care and deliberation. Remember the spermatic vessels and vas deferens are situated behind the posterior layer of the peritoneum within the abdominal cavity, and must be separated by careful blunt dissection, with the fingers, within the abdomen. Remember also that the spermatic vessels take a direction upward and inward and the vas downward and inward, and this divergence can and should be distinctly appreciated.

We said we found it necessary to sever all the spermatic vessels before we could bring the testes down three inches below Ponpart's ligament. These spermatic vessels run almost a straight course from and to the aorta and vena cava,

\*Read in Surgical Section, Lawton-Medicine Park, Okla., May 9, 1917.



respectively, and often being short, fix the testis high up, so they must be doubly tied and severed. This left the artery and veins of the vas deferens free, and care must be taken not to include these vessels in your ligatures.

Then we tore a larger pocket in the scrotum with our fingers. We next ran a suture in lower pole of each testis and placed this suture through the bottom of scrotum, from within out, and thus tied the testis to bottom of scrotum. Next we ran a purse string suture around the neck of the pouch within which each testicle had been placed, so as to hold it there the more securely. This suture, which is chromicised catgut, includes the superficial fascia, and both edges of the split aponeurosis of the external oblique muscle.

We closed the incisions by suturing the lower part of the internal oblique (or conjoined tendon) to Poupart's ligament, thus covering or burying the cord beneath them, with interrupted chromicised catgut.

We next united the edges of the aponeurosis of the external oblique with continuous catgut, and last, closed the skin incision.

The patient made an uneventful recovery, and is now attending school and enjoying good health, as a normal boy, much improved in facial expression, as well.

Eleven months after the operation the boy is in first class health. The right testicle is in proper position in scrotum. The left one, which was found at the internal ring, is about half way between the base and lower apex of the scrotum, and seems to be gradually atrophying.

---

### UNNECESSARY OPERATIONS.

After remarking on the progress of surgery and stating his belief in the competency of most operating surgeons, A. D. Bevan, Chicago, (*Journal A. M. A.*, July 28, 1917), says the great increase in surgical operations has brought with it the new problem of unnecessary operations and incompetency of the operator in many cases. Those who are actively in touch with surgical therapy who see a large number of surgical cases and who come in contact with a large number of men doing surgical work, cannot but be impressed that there is a certain considerable number of operations being performed that are needless and unwarranted and that there is a considerable number of men operating without being qualified to do the work. His impression is that the condition is due to three causes, ignorance, dishonesty and bad judgment. A surgeon is legally a contractor with the patient, agreeing to give the patient the benefit of a knowledge possessed by the professors of the knowledge and art of surgery in the place and at the time the services are rendered, and agreeing also to give the patient the benefit of his best judgment and due diligence and the benefit of established and accepted methods of practice. As regards honesty the golden rule is a good one to follow. The surgeon should not operate on a patient for conditions for which he would not be operated on himself. As far as good judgment on the one hand and surgical tangents and obsessions on the other, it is necessary to remember that the practice of surgery should be the practice of common sense. The three absolutely essential characteristics of the safe surgeon are honesty, good judgment and scientific training. He asks what shall be done about the operations that are done apparently without regard to these essentials and the answer he thinks would be to handle in a general way that problem of surgical therapy as the American Medical Association has handled and is handling the problem of medical therapy, that is, by a committee or council on surgical therapy whose business it will be to analyze and report on these problems from time to time. There are at least two large problems involved: (1) that of unnecessary and unwarranted operations, and (2) that of operations done by incompetent men. Surgical problems should be attacked as are pieces of clinical research, not from a single point of view or by a single man.

## THE SIMPLE CYSTOSCOPE IN DIAGNOSIS.\*

H. REED, M. D., F. A. C. S.

Attending Surgeon, St. Anthony's Hospital, Oklahoma City.

This subject is considered from the standpoint of one who does a general surgical practice. What may be herein said for or against the cystoscope as an instrument of value or precision in diagnosis must be taken as coming not from a highly trained G. U. specialist, but as coming from one who has made an honest effort to use the instrument for all that it is practically worth as an aid in his diagnostic endeavors.

The operative cystoscope is a complicated instrument, expensive, easy to get out of order, its use not often called for, and when used it is not always successfully manipulated even in the hands of experts. This instrument, or rather, these instruments are of no practical value in diagnosis. There is no standard so-called operative cystoscope.

The catheterizing cystoscope for purpose of comparison demands detailed consideration. There is a standardized catheterizing cystoscope, but unfortunately not made in America. The same is true of the simple cystoscope. On continental Europe, when purchasing an instrument one does not ask for Dr. So-and-So's cystoscope. The manufacturers have brought together the good qualities and eliminated the superfluous in all instruments and one selects the instrument of that particular make which in his estimation has in it the best workmanship. There is just about as much difference between the various makes of standard cystoscopes as between different makes of microscopes, and the comparisons are very similar, for the first consideration of a cystoscope should be its optical apparatus.

American cystoscopes are legion in number and each has its living champion. Usually the originator's name designates a type of instrument. Now, in some ways this is very fine. It shows that our specialists possess originality, if not ambition. It gives a chance for a man to get his name in advertising literature of the manufacturer and in the advertising pages of the Medical Journals. There are other advantages which accrue to the originator, but these advantages are not, as a rule, realized by the average American physician to whom these remarks are addressed, and, therefore, not to the patients whom they have in charge. The trouble with American instruments is easily explained. One man representing a group has an idea—usually a good one—which he incorporates in an instrument to the great disadvantage of qualities which the instrument already possesses. That is to say, he has to sacrifice or impair the other good qualities. One of another group wants to make one instrument do for everything—"universal." A dentist could better use one pair of forceps for doing all sorts of extraction, including snags, than the average surgeon employ a "universal cystoscope" exclusively. So much on "brands" of instruments.

The introduction of a ureteral catheter is often desirable. This is particularly the case when one has access to a good X-ray outfit. In my practice the ureteral catheter is rarely employed now except wherein a radiograph is to be made. The number of instances in which it is thus employed probably represents 10 per cent of the patients for whom I make a cystoscopic examination. Pyelography with its wonderful possibilities as well as its dangers, necessitates the use of the ureteral catheter. The location of ureteral calculus is sometimes made easier by the employment of an impregnated catheter and X-ray. Sometimes the collection of separated urines is desirable and the ureteral catheter is more nearly accurate in its results than is the segregation. It is also probably less injurious to the patient. Since the introduction of various means for determining renal efficiency the ureteral catheter is employed far less frequently than formerly. I am firmly convinced that the employment of Indigo-Carmine, as a functional test in conjunction with

\*Read in Surgical Section, Lawton-Medicine Park, Okla., May 9, 1917.

the simple cystoscope gives more accurate data than is to be had from an examination of the separated urines collected by catheters for there are many sources of error in the latter examination which cannot be successfully checked. Certainly the chance for injury to the patient is far less when using the simple cystoscope and no one denies that this fact represents no little consideration.

Another thing which sometimes makes ureteral catheterization desirable is the fact that its performance smacks of the spectacular. It impresses the patient with the fact that something of a feat has been accomplished, for usually the on-lookers are lavish in their admiration of the performance. That is to be accomplished by using a catheterizing cystoscope that cannot be done with a simpler, more satisfactory, and much safer instrument. For the allowances for errors in the use of the catheter are many, while the dangers both from cystoscope and catheter are not insignificant.

The simple cystoscope is a smooth instrument which may be introduced with as much ease by the operator and with practically as little pain to the patient as may the ordinary sound in the absence of abnormality in the urethra. There are two absolute contra-indications for its use: Namely, (1) a urethra which will not admit of its introduction without trauma, and (2) acute cystitis. Since in its judicious employment in gentle hands no harm will be done to the patient, the indications for its use become manifold. It would be superfluous for me to mention those conditions which are confined to the bladder alone in which cystoscopic examination reveals as clear as day the true state of affairs.

In the diagnosis of kidney and ureteral disease the simple cystoscope has a large field of usefulness. For examples I mention the following conditions: (1) Hematuria, assuming that it is of renal or ureteral origin, can easily be diagnosed. In the most severe types only may one have difficulty in getting a clear field in which to make observations. I have not found this difficulty to be insurmountable. It is indeed rare that the blood flow from the ureter comes in a continuous stream, and by introducing the instrument promptly when once the bladder is clear, one can usually determine at once from which ureter the blood is coming.

Albuminuria does not nearly always mean bilateral nephritis. When one has cause to suspect that albuminuria results from unilateral disease and cannot determine which kidney is involved, from physical findings he at once thinks of separated urines as furnishing the means of accurately determining the offending structure. Were it not for some sources of error in such procedure, catheterizing the ureters and collecting the urines would be in order. It not infrequently happens, however, that the catheter produces trauma of the ureter of such degree that there is blood in the specimen of urine and if this trauma should be produced on the healthy side, it can be readily seen that conclusions based on the examination of such urine might lead to disastrous results. With the simple cystoscopes in conjunction with Indigo-Carmine, I have been able to get more satisfactory results than when I formerly employed the ureteral catheter for the purpose of making diagnosis in unilateral albuminuria.

Finally the simple cystoscope in conjunction with Indigo-Carmine has given me the utmost satisfaction in determining the relative efficiency of the opposite kidney wherein surgical measures have been considered in a diseased kidney. By the results of this examination I have absolutely refused to sacrifice diseased kidneys which from all other clinical and physical findings should have been removed. By thus checking up the ability of the presumably sound kidney to perform the work of both unhampered and acting upon the results obtained in this examination, I am pleased to say that the results of operation when undertaken will compare favorably with the best statistics.

It is to the preoperative examination with the simple cystoscope and not to any special surgical skill that I insist is due the credit for these results.



## MUSCLE TRAINING IN INFANTILE PARALYSIS.\*

DOROTHY J. HOLLAND, M. D., Oklahoma City.

Muscle training in infantile paralysis is an attempt to redevelop partially paralyzed muscles by stimulating the mind of the patient to produce impulses strong enough to pass through the impaired original nerve pathways, or in the case of wholly paralyzed muscles, to help the patient develop new pathways.

The damaging effects of the disease are attributed in part to direct pressure on the nerve cells, hemorrhages, edema and to exudates to which must be added the anemia following the constriction of blood vessels and in addition to this the direct toxic action of the virus itself on the nerve cells. Anemia and pressure causes degeneration, and if the hemorrhage and exudate are absorbed soon enough the cells may recover function. On the other hand the nerve cells may go on to complete degeneration if unfavorable conditions are prolonged or excessive.

The destruction of spinal cells in any center naturally represents a loss of function of those cells, but the connection between the bundles of motor cells and the connections between muscles and motor cells are so free and so manifold that unless the destruction has been so very extensive the possibility remains of establishing new connections between the motor cells and the muscles. The great tendency toward spontaneous repair in this disease is explained by the pathology which shows also why partial paralysis is so much more common than total.

Following the development of paralysis comes a stationary period after which begins the spontaneous improvement in muscle power. This period was formerly thought to last about six months, but later observation has shown that it is by no means ended after a period of one year or even several years.

This spontaneous improvement may begin with, or slightly before, the disappearance of tenderness and progresses to any point up to complete functional recovery. There are no figures as yet to show how late purely spontaneous improvement lasts. Apparently the treatment of some of the affected muscles increases the spontaneous improvement in the other untreated affected muscles in the same individual.

It is thought best not to begin muscle training until the tenderness has disappeared, but in cases of severe contracture, though it may cause some pain, it is better to overstretch these muscles at stated intervals, to correct and to prevent further contracture. Through the first weeks of the onset, the most severe cases show but little return of power, tenderness is severe and may last a long time, and the paralysis is widespread.

In general with muscle training the outlook is better in the first year than later, and the more voluntary power shown by the affected muscles, the better the outlook for such muscles. It must be remembered that total paralysis is less common than partial. Most untreated or badly treated cases are capable of marked improvement by proper muscle training and correction of deformities.

The muscles which we find most often affected are the quadriceps, the gluteals, the gastrocnemius, the anterior tibialis, and the deltoid. They present various problems in walking, and, in the case of paralysis of the deltoid, abduction at the shoulder is practically impossible. The supraspinatus alone is not able to perform this function. Leg paralysis is more frequent than arm paralysis.

The reflexes will be found diminished or absent, and the reaction of degeneration is present to electrical current in paralyzed muscles. Sensation is ordinarily stated to be unimpaired, but the modern pathology makes this seem unlikely, because the posterior root ganglion is generally the first part of the nervous system to be affected and tenderness is usually present early.

In a few cases tested by Prof. E. G. Martin of Harvard Medical School, by his delicate electrical test for sensation, all showed diminution of sensation over the

\*Read by Dr. Robt. L. Hull in Section on Pediatrics, Lawton-Medicine Park, Okla., May 9, 1917.

affected limbs. Circulation is impaired, and may result in atrophy of bone and muscle and retarded growth of the limb.

The most competent orthopedic surgeons find in their experience that exercise treatment furnishes the largest possibilities for an actual improvement. The longer we follow this line of treatment the more we feel in favor of it; as it has given us such satisfactory results, and at times improvement which was quite unexpected.

There are various reasons and indications for muscle training. We know that when a normal muscle is inactive for any length of time, it atrophies. It is an accepted physiological principle that the exercise of the normal function of a muscle is the best means of increasing its size and strength.

To understand the value of muscle training we must first know the action. A voluntary motion is a very complicated process, and requires the cooperation of many different neurons: the motor neurons which lead stimuli from the cortical motor centers to the peripheral nerves, the association neurons which furnish the connection of the various cerebral centers, and also the sensory neurons of muscles and joints which, by their action, enable the brain to control the correct performance of the movement. All of these suffer from lack of action when one of them is impaired.

The stimulated condition of a neuron which is produced by any adequate stimulus, provided this is above the stimulus threshold, acts in turn as a stimulus on the contact neuron, provided the neuron is sufficiently stimulated—is above the neuron threshold. Furthermore, an impulse which at first is unable to produce a contraction, or has no actual effect in the production of a contraction, nevertheless prepares the way for the following stimuli so that they may overcome the resistances given by passing through that neuron and over to the next one. In this way the greatest effect of cumulation of stimuli is explained, which is very important if we are to gain muscle control. These resistances are not of equal value, but are subject to a considerable change according to the amount and character of the stimuli which pass along the neurons. There may also be a lowering of the neuron threshold. On the other hand, by the lack of appropriate stimuli, the neuron threshold is raised and resistances are increased. By furnishing the proper stimuli a lowering may take place again provided the anatomical lesion is not too severe. Taking these theories to be true, we know of no way in which the neuron threshold can be so well lowered as by rational exercise training.

There are other pathways which may be substituted, but the neuron thresholds are high. As a matter of real education, a supply of adequate stimuli by exercise treatment is necessary to take full advantage of these unused storehouses of nervous energy.

Muscle training is important in two ways; it builds up the muscular tissue as is so well shown in hypertrophy of muscles in athletes. And it increases the power and endurance of the muscle. There is also a favorable influence exerted on the nerves supplying these muscles.

Special indications for muscle training are given in cases of partial paralysis. In most parts of the body the muscles are arranged in such a way that if one muscle is paralyzed, another may take its function to some extent. We must therefore study each case carefully and try to find out which muscles can be substituted and to what extent they may be trained.

The influence of muscle therapy on the condition of joints is one of the chief indications for exercise treatment, as it prevents contractures and stiffening of joints, although frequently the assistance of braces or casts are needed. The real value of preventive measures is too often underestimated, because, in a single case it is impossible to say whether or not complications would appear. Frequently the restoration of function is dependent, not only on relief of paralysis, but on the cure of mechanical obstruction of one or several joints. In such cases exercises are indispensable, although at times an operation is necessary.

A great deal of the success of muscle training may depend on the accuracy of movement. Each exercise must be done slowly and as perfectly as conditions allow. Quantity is of no value; it is only quality that counts. Careful attention of both operator and patient is demanded. The patient must concentrate his mind on the moving limb and accompany each movement with his will power; that is, the training of the peripheral neurons must be accompanied by a training of the central and associative neurons. Mental cooperation cannot be expected in small children. For this reason we have to be satisfied with giving passive exercises—always being careful to guard against tension on the delicate muscles.

The amount of exercise that the patient can take varies on different days and with increasing improvement. We especially emphasize that they do not over-exert themselves. Too much may do more harm than good in that it may cause nervousness and lack of interest, and may nullify what we have gained. It is a well known fact that a muscle may be given so much work to do, that weakening and atrophy instead of strengthening and increase of size will result. The well-being and efficiency of a muscle is largely dependent on the performance by it of a certain number of active contractions. When we can do this, we are training the patient to perform what is of the utmost importance toward securing a satisfactory recovery.

### ACUTE INTESTINAL OBSTRUCTION.\*

F. L. CARSON, M. D., F. A. C. S., Shawnee, Okla.

My excuse for presenting such a time worn topic as this lies in the fact that the mortality in intestinal obstruction is entirely too high and its incidence too frequent. Standing second in the list as the cause of death in acute abdominal disease, headed only by appendicitis, no final word has been spoken of either of these two conditions until so formidable a mortality is lowered.

It has long been common knowledge that the symptoms of intestinal obstruction are in inverse ratio to the distance from the pylorus. Obstructions of the rectum or even the colon produce symptoms only after the lapse of considerable time, while obstructions in the duodenum are rapidly fatal. This was especially remarkable when we considered that the bacterial flora were very much more numerous in the lower intestinal tract, and it was only when Stone, Whipple, and Berheim,<sup>1,2,3</sup> explained that the phenomena were due to toxins secreted by the normal cells of the duodenum, that this was understood. The results obtained by these experiments have been almost universally corroborated and most nearly agree with the clinical findings in these cases. Hartwell and Hoguet<sup>4</sup> maintain that the symptoms are due to a rapid depletion of the body fluids plus a bacterial invasion of the paralyzed and traumatized intestinal wall. This theory has not met with general concurrence as the dehydration in intestinal obstruction is no greater than in other toxemia.

Whipple<sup>5</sup> states that the symptoms are due to a primary proteose, which may be easily precipitated from the contents of the closed loop of intestine, and claims also that a similar substance is the cause of symptom in peritonitis, and acute pancreatitis. Draper,<sup>9</sup> who has probably done more experimental work along this line than any other one, says: "The cause of death in intestinal obstruction is still unknown, but all recent studies point to aberrant activity of the duodenal and probably pancreatic cells. The old hypothesis that the toxin is of bacterial or food decomposition origin, may be looked on as discarded." All are agreed that a general bacteremia is probably not the rule. All experimental work along this line, however interesting, must be supplemented by clinical evidence; and we do know that high obstruction is rapidly fatal and low obstruction is relatively benign, and that the symptoms in the former are acute, sudden and stormy, while in the latter they may be insidious.

\*Read in Surgical Section, Lawton-Medicine Park, Okla., May 9, 1917.



In considering the diagnosis of acute intestinal obstruction, one need hardly recount the many forms, nor the various etiological factors; it is enough to be sufficiently conversant with the symptoms, to diagnosticate the condition, but in reviewing my small surgical career, I can call to mind at least five strangulated external herniae, in which the diagnosis was overlooked. Then how much more frequently may we expect the rarer and more obscure forms of internal obstructions to escape detection?

The treatment of intestinal obstruction, once the diagnosis is certain, resolves itself into the expectant and operative. In considering the former, of course it is unnecessary to recount the dangers of giving purgatives. The only methods worthy of consideration are, enemata, atropine, pituitrin, and similar remedies; these, associated with gastric lavage should, if rapid improvement is not noted, be supplemented by laparotomy.

In operating for this condition, local anesthesia should be chosen whenever possible, as the administration of a general anesthetic is likely to result disastrously owing to the dangers of drowning in the vomitus. The advantage of ether lies in the fact that the whole hand may be introduced into the abdomen, and a more rapid search be made for the obstruction, and the completed operation more readily concluded. In the average case, as seen in the hospital, however, the dangers outweigh the advantages, and infiltration had best be chosen. In either case the obstruction should be rapidly relieved, and further interference done or not, depending upon the condition of the intestine above the obstructive.

If the bowel is markedly infiltrated, congested, and stiff, enterostomy is to be performed. This may be done many ways; it seems to me that in a patient as sick as these individuals usually are, to resort to the use of Moynihan tubes or other similar devices to empty the contents of the bowel, is adding insult to injury, as the threading of a stiff, infiltrated gut is certainly not devoid of danger.

Personally, for the past few years I have adopted the following technique: the abdomen is opened, the obstruction is searched for, and if found, the cause removed if possible; then a loop of gut as high up as possible is brought into the wound, clamped with rubber, covered forceps, a purse string suture placed on the anti-mesenteric border, including an area about the size of a twenty-five cent piece. After carefully protecting the abdomen from contamination by careful packing, an opening is made with a sharp knife; this is enlarged if necessary; a pezzar catheter is introduced into the lumen of the bowel by using an obturator to stretch and thereby diminish the diameter of the bulbar extremity. The purse string suture is then tied, taking care to invert the edges of the gut. This suture is reinforced by another, still further inverting the peritoneal coat much after the usual method of cholecystostomy, after which the clamps are removed. The purse string is of very fine cat gut; the latter one is left long and is brought out of the wound at the upper angle, when, after the abdomen is accurately closed it is tied over a roll of gauze in such a manner that the visceral and partial peritoneum are brought into close contact. Through the catheter, irrigation of the bowel is then instituted, using warm saline solution. This is repeated every two hours, the irrigation being discontinued from time to time to permit escape of intestinal fluids and gases. The patient is kept in the Fowler position and proctodolysis kept up almost continuously, until the general condition improves.

In removing the tube after it has served its purpose, cut it off about four inches from the skin, seize on two sides with forceps, introduce the obturative and at the same time pull on the forceps, or the tube may be simply cut off close to the skin and the bulbed extremity pushed into the lumen of the bowel and allowed to escape by the natural route.

In about ten cases the resulting fistula has closed spontaneously in from three to ten days following the removal of the tube. The peritoneal surfaces of the bowel fall in a position and usually agglutinate readily, obviating the necessity of a serious secondary closing.

In a previous communication,<sup>7</sup> I advocated a low opening, but in the light of recent researches, do not hesitate to advise jejunostomy rather high up.

Mixer<sup>8</sup> says of enterostomy: "In the small intestine a long standing opening means starvation of the patient, a terrible irritation of the skin, and a difficult and dangerous surgical procedure for relief. Some method should be devised in these cases that will make re-establishment of the canal simple and under the control of the operator."

While the method here described does not meet entirely these requirements, it is a distinct improvement over the usual methods.

- (1). Johns Hopkins Hospital Bulletin, June, 1912.
- (2). J. W. Draper, A. M. A., Vol. 59.
- (3). J. W. Draper, A. M. A., Vol. 63.
- (4). Journal American Medical Society, March, 1912.
- (5). Journal A. M. A., Vol. 67, No. 1.
- (6). Journal A. M. A., Vol. 67, 1915.
- (7). Oklahoma State Medical Journal, September, 1915.
- (8). Surgery, Gynecology and Obstetrics, Vol. 20.

## DIAGNOSIS AND TREATMENT OF ECTOPIC GESTATION.\*

J. HUTCHINGS WHITE, M. D., Muskogee, Okla.

This is one of the time honored subjects which has been discussed and worked until it seems the profession has finally concluded it is standardized; that there is no further occasion for change of views nor is it necessary to give it further thought.

In 1908 I presented to the Medical Association of the Southwest, at Kansas City, a paper on this subject, advocating at that time delayed operation and my experience with tubal pregnancies since that time has only strengthened my views. Far the majority of ectopic cases end in abortion; when complete the hemorrhage is apt to be severe, due to the deficiency of muscle fiber at placental site. On the other hand partial abortion with little tearing of tube may produce only slight hemorrhage and shock to be followed later by severe hemorrhage and profound shock. In one of my cases, a tubal abortion, the abortion was complete and considerable bleeding had taken place, but at the time of the operation, some five days later, there was no fresh red blood.

The diagnosis in these cases, when the classical symptoms are present, is very easy, but in the majority of ectopics we get only a few of these symptoms and they are modified, oftentimes so slight that they may be readily passed over as of minor importance unless one has constantly in mind ectopic pregnancy. Sudden shock, lancinating pain with collapse, cold sweat, rapid feeble pulse, is not the picture most often encountered. The pain may be very sharp and sudden and severe, but at the time the patient consults you, she complains only of soreness and it is only by close questioning that the early history is elicited. There is a history of skipping one or more periods, followed by a bloody discharge containing shreds, which may be intermittent or continuous.

Dr. Philander Harris says: "When any woman after puberty and before menopause, who has menstruated regularly and painlessly, went four, five, six, eight, fifteen or eighteen days over the time at which menstruation was due, saw blood from the vagina, differing in quality, color, quantity or consistency, from her usual menstrual flow, and had pain generally severe in one side of the pelvis or the other, or possibly in the hypogastric region, ectopic gestation might be presumed," and I might add to this, and the finding of a pelvic mass establishes the diagnosis. Dr. Lawson Tate once made the remark that ectopic pregnancy before rupture could not be diagnosed. Such is not the case nowadays, for many are diagnosed and operated on before rupture. I recall the case of a young woman

\*Read in Surgical Section, Lawton-Medicine Park, Okla., May 9, 1917.

whom I examined for the first time under an anesthetic just before her physician was to curette her. The history was that of irregular bleeding after skipping a period, little or no pain. I found on examination an oval sausage-like mass freely movable on left side of uterus and made a diagnosis of ectopic, advising operation, which was not done at that time. Patient returned home after curettage to be brought back to the hospital in two weeks, in severe shock and collapse; came very near losing her life from intra-abdominal hemorrhage and shock.

The symptoms of greatest value in diagnosing hemorrhage and shock are atypical menstruation, pain and fainting or sensation of fainting. With these symptoms and a pelvic mass, operation is indicated whether it be ectopic or not.

It makes no difference so far as value of the signs and symptoms whether they occur in primipara or nullipara. More than fifty per cent of my cases have occurred in patients who have not borne children. I consider the finding of the pelvic mass, when accompanied with atypical menses, the most dependable point in clinching a diagnosis of tubal pregnancy. We may have the menstrual disturbance without a pelvic mass and still have ectopic. A definite diagnosis in such cases, however, is problematical. One should always bear in mind incomplete abortion.

The question of operative procedure in this class of cases, I am sure, will not enter into the discussion by this section. As to when and how these cases should be operated are, however, debatable points. Unfortunately for both patient and surgeon there are still a few adherents to the vaginal route in operations for tubal pregnancies. Far the majority of operators choose the abdominal incision in these cases. The latter method enables one to have the bleeding points under one's eye and there is less chance of sepsis.

Boldt years ago said: "Whether or not an operation for intraperitoneal hemorrhage from ectopic pregnancy should be deferred or be undertaken immediately must depend upon the judgment of the individual physician, based on his personal experience, and also on a careful study of the experience of others."

Undoubtedly if these cases are closely observed a few hours after rupture, yes, at times, an hour would reveal the fact as to whether or not our patient is likely to rally from shock and hemorrhage and place her in the lower mortality class.

Kelly says: "I would rather wait a few hours in some cases, if there are any encouraging signs of improvement, to gain a maximum effect from stimulation and then to operate."

Newell says: "In cases which are first seen in extremes from shock and hemorrhage, a reasonable interval before operation should be granted to allow for reaction which usually follows the cessation of hemorrhage. If on the other hand no improvement follows within a few hours, or if the patient's condition continues to fail, it may be taken for granted that hemorrhage is still going on and immediate operation, followed by heroic stimulation, offers the best chance."

Robb, Stillwagon, Simpson and Holden favor deferred operation.

I beg to quote the following from Mumford Surgery: "I submit that there are few surgical emergencies, calling for greater tact, resourcefulness, judgment and swift technical skill."

Montgomery thinks immediate operation is demanded.

Eight years ago I said: "I believe as time goes on deferred operation will be the operation of choice. While there will be cases coming up which demand immediate work, they will prove rather the exception than the rule. Hemorrhage and shock are the symptoms we most fear and a short period of observation will tell the experienced surgeon if waiting be advantageous or detrimental to the patient. Shock of operation should certainly not be added to shock of hemorrhage when it is possible to avoid." My experience since that time has only served to increase my belief that deferred operation is the better treatment of these cases. I am sorry my records are not so complete that I can give you a detailed report



of ectopic pregnancies coming under my observation. The time lapsing between rupture and operation was from three days to three months. Fifty per cent of the cases were in nullipara. One case had three operations in four years for three ectopies. The first operation was performed by a surgeon who believed in the vaginal route. He opened the cul-de-sac, drained and left the tube in situ. Two years later I operated for ruptured ectopic and found opposite tube involved. A scar on the left tube I took for the site of rupture of previous tubal pregnancy. The year following the second operation I operated again for tubal gestation in the tube on which I found scar at a previous operation.

It is my belief that the mortality in these cases would be materially lessened if these patients, after rupture and while in shock, were left where found, ice bag placed on abdomen, morphine to relieve pain and produce rest, strychnia for general stimulation and kept absolutely quiet, that their chances of recovery following an operation when they rally will be much greater than if hurriedly placed in an ambulance or on a train and rushed off to a hospital for immediate operation.

Since writing this paper Dr. C. J. Wallace of Duluth, Minnesota, published a report of the successful "Transplantation of Ectopic Pregnancy from Fallopian Tube to Cavity of the Uterus."

---

### PROCEEDINGS OF ST. ANTHONY'S CLINICAL SOCIETY.

DR. A. A. WILL, Pres.

DR. LEILA E. ANDREWS, Secy.

Oklahoma City, September 17, 1917.

Dr. L. J. Moorman presented the following case of pulmonary abscess:

**Case 1.** N. S., aged 28, occupation tailor. Family and personal history negative. Present illness: About eight weeks ago was operated and an appendiceal abscess drained. A second operation two weeks later for removal of appendix. About four weeks after second operation patient developed severe pain at the base of right lung in posterior axillary region, also a rise of temperature and chilly sensations. A few days later patient began to cough and after three or four days of ineffective coughing he began to raise quantities of purulent sputum.

Upon entering the hospital, Sept., 9th he had temperature of 103, respiration 25, pulse 90, very foul breath, foul smelling, purulent sputum. There was limited excursion of the right half of the chest with dullness at the right base extending into the right axilla. Breath sound diminished on the right with bronchovesicular breathing over dull area. Also a few medium moist rales about the center of the dull area. The diagnosis was pulmonary abscess, probably metastatic. The treatment consisted of rest in bed, fresh air, good food, and an attempt to drain the abscess by having the patient bend over the foot or side of the bed with head on the floor for ten to fifteen minutes three or four times a day. In this way the bronchial tree is inverted and drainage favored by gravity. This proved quite effective in this case. After assuming this position for fifteen minutes, the patient, who had been coughing almost constantly before, would often rest for three or four hours without coughing. His temperature has gradually receded until it now remains practically normal.

If the above treatment had failed to bring about improvement in the patient's condition, surgical drainage would have been advised.

**Laboratory findings:** The sputum showed streptococci, staphylococci and pneumococci and pus cells. The urine was negative and the blood picture negative except a slight leukocytosis 15,800. An X-ray of the chest revealed an area of increased density corresponding to the dullness described above with a small round cavity in the center.

**Subsequent history:** Within twenty-four hours after this man was presented to the Clinical Society he had a severe coughing spell and suddenly developed

intense pain in the right chest with rapid rise of temperature to 104, respiration 45 and pulse 130, with signs of pronounced shock. Examination of the chest revealed a right pneumothorax which rapidly became a pyo-pneumothorax. Evidently the abscess cavity was close to the surface of the lung and the strain of coughing had broken through the pleural wall into the pleural space and the lung was compressed into the vertebral trough being bound at the base by adhesions. This was beautifully shown by the use of the X-ray. Thirty-six hours after this occurred Dr. R. M. Howard resected a rib under local anesthesia and drained the pleural sac. Since this was done the patient has gradually improved and may ultimately recover.

**Case 2.** In connection with the case just presented, I desire to report briefly the following case which died in the hospital only a few days ago.

Mrs. M. L. W., age 23; family and personal history negative, except a rather run down condition for the past two years. Present illness: Patient admitted to hospital July 24th with a history of having had an attack of pain in lower anterior thoracic region five weeks before admission. After four or five days of pain she developed a dry cough which was followed after four or five days by profuse purulent sputum, later becoming dark brown and having a very offensive putrid odor. The patient was about five months pregnant.

The clinical picture and the physical findings (the right lung being involved) were so nearly identical with those found in the case just presented that further description will be omitted.

In spite of the care and management as outlined in the case just presented, this case progressed rapidly from bad to worse and on the fourth day Dr. Horace Reed resected two of the ribs under gas anesthesia, stitched the two pleural layers together, penetrated the abscess cavity and established free drainage. On the third day after operation the uterus expelled its contents practically without warning. For about five or six days the patient's general condition seemed much better. Then she had a rise of temperature with increased toxemia, which could not be explained and which persisted. The liver dullness extended three inches below the costal margin and patient complained of severe and constant pain in the right hypochondriac region. Thinking that there might be a subphrenic abscess or liver abscess, this region was explored with a needle, but nothing found.

About ten days after the operation the patient, while coughing, experienced a feeling as though something broke loose in her right chest and she developed spontaneous pneumothorax with increasing dyspnoea and added toxemia. A few days later fluctuation appeared in the seventh interspace at the mammary line. The fluctuating mass was incised under local anesthesia and great quantities of foul smelling dark colored fluid discharged. Toxic diarrhea and acute dilation of the stomach developed and the patient died twenty-seven days after admission to hospital.

The X-ray and laboratory findings were practically the same as in the case presented. The autopsy report, which follows, helps to clear up some of the puzzling features. Perhaps the rise of temperature a few days after operation was due to the secondary gangrene of the uterus.

No. 16960. Mrs. M. L. W., age 23. Service Dr. Moorman. Autopsy 5 hours after death. Autopsy No. 5008-17. Died August 21, 1917. Dr. O. J. Walker and Dr. E. Strader.

**General Sepsis.** Empyema—Right Chest. Spontaneous Pneumothorax (right). Lung Abscess Gangrenous (right lower lobe). Gangrenous Pneumonia (right lower lobe). Endometritis, gangrenous. Lacerated Cervix (recent). Appendicitis, chronic. Colitis, fibrinous. Endocarditis, chronic sclerotic. Toxic Congestion of Liver. Toxic Congestion of Spleen. Old Pleura Adhesions (left). Old Peri-Hepatitis. Chronic Interstitial Nephritis.

**Notanda.** The uterine affection was secondary to the changes in chest. The

right chest was notable in that there was a complete separation between the lower and middle lobes. The upper and middle lobes were completely atelectatic.

Body was that of a woman about 23 years old, 68 1-2 inches tall. The body was very much emaciated. Post mortem lividity was marked. Pupils were slightly dilated. The teeth were fair. Thorax short and ribs prominent. Abdomen prominent. Right thorax bulged. There were discharging sinuses at the level of the 7th costal space in the mammary line and in the middle axillary line, right side.

**Thorax:** There was a large subcutaneous abscess on the right side extending from the 5th to the 8th ribs, and from the episternal to the anterior axillary lines.

**Left Lung:** The left lung and pleura were apparently normal except for a few adhesions posterior and slightly enlarged peri-bronchial glands.

**Right Lung:** Right chest was filled with about a quart of pus. Upper and middle lobes were collapsed and flattened and adherent to middle line. Lower lobe was separated from other two except at the hilus and pressed down against diaphragm and posterior wall to which it was tightly adherent. The lung substance of the upper and middle lobes was collapsed and inflammatory; that of the lower was solid and meaty red except at lower and outer portion which contained a gangrenous abscess about the size of a goose egg. This had burrowed down along the lower border of the 7th right to the opening in the middle axillary line. The main pus cavity included the whole of the pleural cavity between the separated lobes and the chest wall and had burrowed down behind the lower lobe. This cavity communicated with the opening in the mammary line, but the organ was not adherent.

**Heart:** There was a small amount of fluid in the pericardium. The organ was somewhat enlarged. There was a small amount of fat under the pericardium. Both ventricles were fairly well contracted. The right auricle of the heart contained a large black clot. The valves were fairly loose and showed little change. The mitral valve showed some slight nodular thickening close to the border. The ventricle had a fairly large cavity. The base of the aorta was elastic and the coronary opening somewhat dilated. The F. O. was closed. Musculature was pale in color and showed fibrosis.

**Abdomen:** The abdominal wall was thin. The recti were of pale color. The G. O. was very small and contained but little fat. The appendix was contorted in an S shape and pretty well up under the cecum. The lower end of the cecum was enclosed in a mass of fibrin and was much inflamed. The superior surface of the liver was adherent to the diaphragm on the right side and the organ was pushed low down into the abdomen. There was a general visceroptosis.

**Stomach:** The stomach was very much enlarged and the lower border extended to the brim of the pelvis. The wall was thin and contained about 1 1-2 pints of greenish gray material. The mucosa was pale and looked unhealthy.

**Intestines:** The intestines were normal throughout except the tip of the cecum which was dark and congested and surrounded with inflamed tissue.

**Pancreas:** The organ was usual size. The lobules were distinct and firm. The head was not indurated.

**Liver:** The organ was much enlarged and of a pale color. Diaphragm was very adherent. On section the lobules were quite distinct, but in areas were light gray color. The capsule stripped easily and smoothly. The G. B. was thin-walled and normal size.

**Spleen:** The spleen was about normal size but showed slight congestion. The cut surface was soft and dark in color. The malpighian bodies were not seen.

**Kidney, Left:** The organ was small, contracted, somewhat nodular. The capsule was fairly thin and peeled with moderate ease, leaving a rough nodular surface. The nodule areas were rather firm and of a yellowish gray color. On section, the kidney substance was markedly reduced, a large portion being occupied with firm yellowish gray fibrous tissue. The cortex and medulla were fairly



well defined. The cortex was thin and had sharp edges. The vessels at the hylus were engorged. The pelvis was clear.

**Kidney, Right:** Same as left.

**Adrenals:** Both organs were large. On section the organ showed a bright yellow cortex with a medulla that was not enlarged.

**Bladder:** The wall was somewhat thickened. Mucosa was normal in color and appearance. The ureteral openings were patent.

**Adnexa:** The tubes and ovaries were normal in size with the former congested, somewhat enlarged and of a dark bluish color. The uterus was about the size of a large goose egg, soft and boggy. On section the cervix was badly lacerated and together with the endometrium was of a dark greenish black color and very foul odor.

**Lung:** Lung shows alveola filled with cellular exudate. Walls of bronchioles are thickened and inflammatory. Parts of lung in state of atelectasis.

### Bullet Wound of Brain—Decompression.

Dr. S. R. Cunningham then presented a young man who had entered St. Anthony's Hospital six days following a bullet wound of the head. Upon admission, he was delirious, suffering with intense headache, temperature 104; blood pressure S.160, D.110. A spinal puncture was done, removing three ounces of almost pure blood, under great pressure. His bullet wound showed the point of entrance to be in the right temporal region. It had ranged upward; one-half the ball showed by the X-ray to be just inside the inner plate; the other half seemed high in the cerebrum and about midway. Fourteen hours after admission he was again relieved of some of his spinal fluid which showed less blood, and a little less pressure. Twenty-four hours after admission another puncture with still less pressure and blood. A decompression was done over the site of injury, and the half of the bullet was removed. Twenty-four hours after admission he was resting quietly, was rational, and temperature and pulse practically normal. He was dismissed at the end of twelve days, after a normal convalescence. At the end of twelve days he returned with a headache; blood pressure 140-100. Another X-ray plate showed that the half of the bullet still within the cranium had changed its position and was lower—probably within a ventricle. A second operation was performed at the old site. A small abscess drained and spicule of bone removed. Normal convalescence.

Both cases and case reports brought out a fine discussion.

---

### THE TREATMENT OF SCOLIOSIS.

Need of a decision as to whether scoliosis is a deformity or a disease is emphasized by F. E. Peckham, Providence, R. I. (*Journal A. M. A.*, Oct. 13, 1917), whose studies have convinced him that the bones and ligaments in these conditions are in a softened condition and that it is only when such is the case that the term scoliosis should be used. While there are deformities simulating scoliosis, there are thousands of children habitually using faulty positions who do not develop the disease. The author admits the hypothesis that interference with calcium metabolism may be a cause of the condition. In cases of hypothyroidism, the thyroid gland may be involved. In one case cited in which scoliosis was present in addition to other symptoms, a deformity disappeared under thyroid treatment. Regarding the mechanical treatment, the author has tried so to utilize it that it will not prevent patients from following their ordinary occupations or interfere with their comfort. In his work thus far, a new plaster jacket has been applied to the patient each month, in order to start all over again at frequent intervals with the body in as good a position as the patient will tolerate. Several cases are reported, and the article is illustrated.

## JOURNAL OF THE OKLAHOMA STATE MEDICAL ASSOCIATION

VOLUME X

NOVEMBER, 1917

NUMBER 11

PUBLISHED MONTHLY AT MUSKOGEE, OKLA., UNDER DIRECTION OF THE COUNCIL

DR. CLAUDE A. THOMPSON, EDITOR-IN-CHIEF

ENTERED AT THE POST OFFICE AT MUSKOGEE, OKLAHOMA, AS SECOND CLASS MAIL MATTER, JULY 28, 1912

THIS IS THE OFFICIAL JOURNAL OF THE OKLAHOMA STATE MEDICAL ASSOCIATION. ALL COMMUNICATIONS SHOULD BE ADDRESSED TO THE JOURNAL OF THE OKLAHOMA STATE MEDICAL ASSOCIATION, 307-8 SURETY BUILDING, MUSKOGEE, OKLAHOMA.

The editorial department is not responsible for the opinions expressed in the original articles of contributors.

Reprints of original articles will be supplied at actual cost, provided request for them is attached to manuscript or made in sufficient time before publication.

Articles sent this Journal for publication and all those read at the annual meetings of the State Association are the sole property of this Journal. The Journal relies on each individual contributor's strict adherence to this well-known rule of medical journalism. In the event an article sent this Journal for publication is published before appearance in the Journal, the manuscript will be returned to the writer.

Failure to receive the Journal should call for immediate notification of the editor, 307-8 Surety Building, Muskogee, Okla

Local news of possible interest to the medical profession, notes on removals, changes in address, deaths and weddings will be gratefully received.

Advertising of articles, drugs or compounds not approved by the Council on Pharmacy of the A. M. A. will not be accepted.

Advertising rates will be supplied on application. It is suggested that wherever possible members of the State Association should patronize our advertisers in preference to others as a matter of fair reciprocity.

## EDITORIAL

## HOW TROUBLES OCCUR OVER WORKMEN'S COMPENSATION.

We append below a statement for dressings furnished a machine helper who was doing time or piece work and earning approximately \$4.50 per day when employed. The injury was a compound fracture of index finger and fracture of other bones of hand. Comment on this seems superfluous. The case was treated 21 days; the bill was for more than one dollar daily.

Dates			Dates		
28	To Gauzes	.65	2	To Bandages	.25
28	To Cotton	.25	2	To Adhesive Tape	.15
28	To Adhesive Tape	.25	3	To Gauze	.25
28	To Lysol	.20	3	To Cotton	.20
28	To Bandages	.25	3	To Adhesive Tape	.15
29	To Gauze	.35	3	To Lysol	.15
29	To Cotton	.20	3	To Bandages	.25
29	To Adhesive Tape	.15	4	To Gauze	.25
29	To Lysol	.15	4	To Cotton	.20
29	To Bandages	.25	4	To Adhesive Tape	.15
30	To Gauze	.25	4	To Lysol	.15
30	To Cotton	.20	4	To Bandages	.25
30	To Adhesive Tape	.15	5	To Gauze	.25
30	To Lysol	.20	5	To Cotton	.20
30	To Bandages	.25	5	To Lysol	.15
31	To Gauze	.25	5	To Adhesive Tape	.15
31	To Cotton	.20	5	To Bandages	.25
31	To Adhesive Tape	.15	5	To Gauze	.25
31	To Lysol	.15	6	To Cotton	.20
31	To Bandages	.25	6	To Adhesive Tape	.15
1	To Gauze	.20	6	To Lysol	.15
1	To Cotton	.20	6	To Bandages	.25
1	To Adhesive Tape	.15	6	To Gauze	.25
1	To Lysol	.20	7	To Cotton	.20
1	To Bandages	.25	7	To Lysol	.15
2	To Gauze	.25	7	To Adhesive Tape	.15
2	To Cotton	.20	7	To Bandages	.25
2	To Lysol	.15	7	To Gauze	.25

Dates		Dates	
8	To Cotton.....	13	To Cotton.....
8	To Adhesive Tape.....	13	To Adhesive Tape.....
8	To Lysol.....	13	To Lysol.....
8	To Bandages.....	13	To Bandages.....
8	To Gauze.....	14	To Gauze.....
9	To Cotton.....	14	To Cotton.....
9	To Adhesive Tape.....	14	To Lysol.....
9	To Lysol.....	14	To Adhesive Tape.....
9	To Bandages.....	14	To Bandages.....
10	To Gauze.....	15	To Gauze.....
10	To Cotton.....	15	To Cotton.....
10	To Adhesive Tape.....	15	To Adhesive Tape.....
10	To Lysol.....	15	To Bandages.....
10	To Bandages.....	15	To Lysol.....
11	To Gauze.....	16	To Gauze.....
11	To Cotton.....	16	To Cotton.....
11	To Adhesive Tape.....	16	To Lysol.....
11	To Lysol.....	16	To Adhesive Tape.....
11	To Bandages.....	16	To Bandages.....
12	To Gauze.....	17	To Gauze.....
12	To Cotton.....	17	To Bandages.....
12	To Lysol.....	17	To Adhesive Tape.....
12	To Adhesive Tape.....	17	To Lysol.....
12	To Bandages.....	17	To Cotton.....
13	To Gauze.....		

### OUR MEDICAL WAR SITUATION.

It is commendable that on every hand those charged with the proper physical care of our soldiers and general sanitation of their camps and cantonments, are measuring up to their responsibilities as never before.

It is not generally known that special details of expert examiners are going through the men of the draft with a fine toothed comb in order to eliminate the man with incipient tuberculosis, for by experience of other armies in the field in France we have learned that that disease is especially prone to recurrence or development in that country. The commendable thing about all of it is that we are doing this before the man is dead.

Near the larger cantonments the liquor and vice question is being so handled that it is said that the appearance of a man in uniform about the places is equivalent to a riot call for the police.

A capable body of alienists has been assigned to go carefully into the possibilities of nervous and mental diseases in the assembling men.

Never before have the camps been so thoroughly policed as to sanitation. Kitchens, company streets, corrals are ordered to be kept scrupulously clean. Latrines must be cleaned by the best methods often enough to keep them at their minimum of danger. Water supplies must be above reproach and to clench a part of the protection every man is protected by vaccination against typhoid and paratyphoid. The water may be placed only in one position and must be drawn only in such a manner and that is the best manner for the protection of the supply. Tents, bedding and clothing must be aired and given proper and systematic care.

The company kitchen has never been a very attractive place, but now it must be kept in the best of order. Much of the waste is promptly carried to the incinerators and not allowed to overflow garbage cans as of old, while every bit of food is either screened or covered to protect against dust and infection. It goes without saying that the food is above reproach and the men have opportunity to purchase at about cost to the Government such articles as they require for their simple needs.

While the rank of medical officers has not been raised commensurate with that held by medical officers of other countries and armies, a bill to increase rank, introduced by Senator Owen, is pending now in Congress and if there is any fair-



ness in Washington it will become law eventually. However, there is a report that line officers are very chary up to date with interfering with the orders of medical officers. Perhaps they have not forgotten the lessons of 1898 and the disastrous consequences following disregard of medical and sanitary orders.

The entire Nation is slowly awaking to the fact that only in cooperation and self sacrifice may we be successful. This self sacrifice is patriotically attested by the volunteering of from 13,000 to 16,000 physicians throughout the country, most of whom have left lucrative practices to enter training camps. At this time it may be said that several thousand are chafing at the delay and uncertainty and are clamoring for assignments to some branch of medical service.

## CURRENT MEDICAL LITERATURE

Conducted by

DRS. CURT von WEDEL, Jr., and L. J. MOORMAN, Oklahoma City  
and FRED J. WILKEMEYER, Muskogee

### GOITRE.

#### An Analysis of 125 Cases With a Note on the Treatment.

By Leigh F. Watson, M. D., Chicago.

**Abstract:** The author reviews the records of 125 goitre patients considering the cause, age at onset, and effect of previous operations in certain cases. He illustrates by table the degree of enlargement, and reports the results following quinin and urea injection.

In 43 per cent no exciting cause could be elicited; in the remaining 57 per cent the onset could be ascribed to a definite exciting cause. Of the 125 cases, 15 per cent was caused by worry; parturition was responsible for 11 per cent and in 9 per cent the condition was due to puberty. Twenty per cent gave a family history of goiter and 11 per cent of nervousness; 19 per cent had had tonsillitis. Forty-five per cent of the exophthalmic patients first noted the goiter eight years before examination at the average age of 34 years, and the symptoms developed at the age of 40. Fifty per cent gave a history of acute onset, two years before coming under observation at the average age of 29 years. Sixty per cent of the nonexophthalmic patients observed that they developed more marked symptoms of intoxication as the goiter became more chronic.

Before coming under treatment, five exophthalmic patients had had ligation of the superior thyroid arteries with temporary relief; four had had partial thyroidectomies without permanent benefit; three had had pelvic operations without lessening the hyperthyroidism; the condition of one was aggravated by a panhysterectomy; and one had had a tonsillectomy six months before without influencing the severity of the exophthalmic symptoms.

Enlargement usually begins in the right lobe, sometimes in the isthmus and least frequently in the left lobe. In 95 per cent of the exophthalmic patients of this group both lobes and isthmus were involved before the goiter became exophthalmic. A majority of the patients noticed increasing symptoms of intoxication as the goiter became more chronic, gradually involving both lobes and isthmus. Eighteen per cent of the mildly toxic patients became exophthalmic after an average period of five years. This study indicates that both nontoxic and toxic goiter occur later in life in nongoitrous localities than in sections where the disease is more prevalent.

The following tables show the results after quinin and urea injections:

Effect of the Injection on Symptoms.	Relieved.	Improved.	Not Imp.
Exophthalmic.....85	(aver. 4 mos.)	15	0
Nonexophthalmic.....84	(aver. 2 mos.)	10	6
Effect of the Injections on Goiter.	Cured.	Reduced.	Not Red.
Exophthalmic.....80	(aver. 5 mos.)	15	5
Nonexophthalmic.....75	(aver. 4 mos.)	12	13

Two patients suffering with severe toxic goiter with exophthalmos of several years duration received only slight benefit; later a lobectomy was done without additional relief. Four exophthalmic patients were pregnant two to four months. Relief from hyperthyroidism followed the injection and they went to term without recurrence and had normal deliveries. The number of patients cured is highest in the group of those who came for treatment early in the disease; the benefit received by those who came later was in proportion to the degree of damage done the circulatory and nervous systems. A goiter that has once disappeared has never recurred. A majority of the patients in this group have been under observation for two to four years. The quinin and urea injection has limitations the same as any other treatment for goiter and can be employed only in selected cases. The treatment of the exophthalmic type in young adults is most difficult, and should be attempted only under the most favorable circumstances. If the best results are to be secured, hyperthyroidal patients must have at least a year of mental and physical rest after treatment.—The New York Medical Journal, Sept. 22, 1917, Vol. CVI, pp. 549 and 450.

### EXPERIENCES IN RECONSTRUCTION SURGERY OF THE EXTREMITIES.

In the September International Clinics, Wayne Babcock calls attention to the needless sacrifice which is often made of extremities, especially the hands, which can be restored to a fair degree of usefulness by conservative surgery. The article is very profusely illustrated. He goes into considerable detail in showing how a badly injured limb may be saved, either partially or completely. The article which does not lend itself readily to condensation, should be consulted by all interested in surgery. It is especially valuable for those entering the Military Service where many of the problems it deals with will be encountered frequently.

### NOTES ON THE STANDARDIZATION AND ADMINISTRATION OF ANTIMENINGOCOCCIC SERUM.

Harold L. Amoss, M. D., New York.

In this communication the writer calls attention to the necessity of federal standardization of preparations of antimeningococcic serum. This communication comes from the Laboratories of the Rockefeller Institute for Medical Research. As a result of his studies he found a striking inferiority of the commercial antimeningococcic serum. A summary of the results of the tests of serums taken from the open market will bring this most strikingly home.

**Serum A (commercial)** is slightly active against normal or regular culture No. 10 and sufficiently active against the parameningococcic culture No. 60. In other words, it is not sufficiently representative of the different type cultures to be suitable for therapeutic purposes. Moreover, the sample, while transparent, contains hemoglobin in excess and in amount giving a red color to the serum. Severe reactions would follow its administration.

**Serum B (board of health).** The agglutinins are somewhat developed for the regular or normal meningococcus Nos. 1 and 7, well developed for the two irregular cultures Nos. 10 and 30, and for the parameningococcus cultures. It is a useful product, but could be improved by the employment for immunization of larger quantities of the regular meningococcus cultures.

**Serum C (commercial)** \* \* \* Its therapeutic efficiency is dubious.

**Serum D (commercial)** \* \* \* The preparation is condemned in its entirety and would give rise to severe, possibly to dangerous, reaction.

**Serum E (commercial)** \* \* \* The preparation is unsatisfactory for therapeutic purposes.

The article is timely and brings to light the reason for European clinicians failure to get the results we here in the United States have obtained with Flexner's preparation.—Abstracted from *Jr. A. M. A.*, October 6, 1917, pp. 1137-1140.

Fred J. Wilkiemeyer.

### CAUSE AND TREATMENT OF CONSTIPATION IN INFANTS AND YOUNG CHILDREN.

In discussing this subject in the International Clinics, C. G. Grulee summarizes his views as follows: "I would like to urge that catharsis be abandoned as a routine treatment; to ask that the simple rules of diet be insisted upon, and that when these are not sufficiently effective such mechanical factors as glycerin suppositories and paraffin oil be resorted to and that only in extreme cases of acute constipation a cathartic be used."

### JUXTA-ARTICULAR BONE LESIONS OF THE HIP.

Henry Ling Taylor, M. D., and George Barrie, M. D., New York.

This article strikingly illustrates the great necessity of always considering in the differential diagnosis of tuberculosis, osteochondritis of the hip, Perthes disease, hemorrhagic (giant cell sarcoma) osteomyelitis, bone abscess. The writers emphasize the necessity of a good roentgenogram to check one's study.

The pathologic picture in hemorrhagic osteomyelitis. In 75 per cent of their series of bone lesions termed hemorrhagic osteomyelitis, a definite history of trauma or injury has been obtained. These injuries, not severe, produce numerous minute fractures of some of the delicate bone trabeculae that compose a great part of the osseous structure. In turn, there follows a disturbance of the normal anatomic circulatory apparatus. As the venous supply is here composed of vessels that are without any muscular coat the lack of support of trabecular framework causes dilatation of the lumen of the vessels, varicosities, venous stasis, and rupture with effusion. The size of the initial lesion, through solution of continuity, may now be increased by pressure from within, exerted against the very delicate normal surrounding osseous structure, causing inhibition of nutrition, rarefaction and further destruction of the bone trabeculae, with repetition of circulatory disturbance noted above.

Efforts at regeneration are brought about in the formation of highly vascular granulation tissue. As no virulent or infective process is here involved, the injury being apparently due to mechanical insult to tissues that are sterile, and as there is no massive destruction of structure, the inflammatory process is a mild one.

It is a well known fact that a low grade inflammation produces granulation tissue always in excess. In these bone lesions it is found that, when the bony defect is filled, several changes take place.

1. If the chemotactic properties in the blood of the individual causes a sufficient stimulant reaction, the vascular granulations are converted into final osseous structure, and full anatomic restoration and architectural arrangement of tissues result. 2. The host may possess the power to produce a metaplasia in the lesion by converting the granulation tissue that fills the bony defect into fibrous structure only. In this event the further progress of the lesion is stayed. It is Nature's effort to cure. While the stimulant reaction of the blood is not enough to give normal restoration of structure, it marks the end of any further progress in the lesion. The fibrous metaplasia causes contraction and retraction of the former exuberant vascular granulations. This stage of the process gives a picture of a fibrocystic osteomyelitis. Absorption or disappearance of all connective tissue apparently sometimes occurs, leaving a bony cavity without any lining membrane but with bony walls rather more dense than the adjoining outlying tissue. Such a cavity may contain sanguineous fluid only or, what is more frequently observed, a thin straw colored fluid. The fluid is sterile, and pus is never present. 3. If conditions pertaining to the host are hostile to either of the foregoing reactions, we observe little or no change in the granulation tissue occupying the bony defect. The attempts at regenerations are feeble, apart from the proliferation of granulation tissue. A vicious circle is established. Overproduction of granulations causes pressure on the osseous structure that it is apparently unable to stand. Nutritional inhibition of the framework produces rarefaction and further bone destruction followed by circulatory disturbance and changes. This stage of the lesion, when it attains any size, is quite commonly wrongly termed, clinically, and roentgenologically, "giant cell sarcoma."

**Bone Abscess.** An infective bone spot may result from acute pneumococcus, staphylococcus, or any acute infection, when the invasion may be sudden with fever, pain and constitutional symptoms. The acute stage may pass over into the chronic stage, when the symptoms are moderate more like those of a beginning hip-tuberculosis, for which it is usually mistaken. Some cases begin without any acute symptoms and generally acquire a slight lameness which may persist for a considerable time, and cannot be distinguished clinically from either hemorrhagic osteomyelitis or beginning Perthes disease.

The roentgenogram in hemorrhagic osteomyelitis show a light spot with smooth outlines and no sclerosis; it may appear to be reticulated or multilocular.

In bone abscess the light spot may be irregular in outline, may contain a sequestrum, or may be surrounded by sclerosed bone.

The article is profusely illustrated with excellent X-ray photos and numerous case reports and represents a thorough scientific piece of work.—Abstracted from *Jr. A. M. A.*, October 11, 1917, pp. 1227-1233.

Fred J. Wilkiemeyer.

## PERSONAL AND GENERAL NEWS

**Dr. T. A. Rhodes**, Cherokee, is doing special work in New Orleans.

**Dr. J. M. Stooksbury**, Shawnee, attended Chicago clinics in October.

**Dr. and Mrs. W. C. Mitchener**, Okmulgee, are visiting Colorado Springs.

**Dr. W. R. Kelly**, Watonga, is making an extended visit to relatives in California.

**Dr. C. S. Petty**, Guthrie, has returned from a six weeks visit to New York clinics.

**Dr. O. G. Bacon** and **Miss Bonnie Coley**, of Davidson, were married September 28.

**Dr. and Mrs. A. S. Piper**, Enid, visited Chicago and other Illinois points in September.

**Dr. J. J. Caviness**, Eldorado, has been appointed county physician of Jackson County.

**Dr. J. L. Houseworth**, Guthrie, visited Oregon in August for the purpose of deer-hunting.

**Dr. and Mrs. A. S. Piper**, Enid, have returned from Chicago where Dr. Piper visited the clinics.

**Dr. G. O. Webb**, Temple, attended the Rock Island Surgeons' meeting in Chicago in October.

**Dr. Jas. H. Hayes**, Enid, who was very sick with pneumonia in October, is reported as convalescent.

**Dr. M. D. Carnell**, Sallisaw, has moved to Okmulgee and formed a partnership with **Dr. W. C. Cummings**.

**Bartlesville physicians** and the City commissioners are devising ways and means to establish a \$50,000.00 hospital.

**Dr. C. E. Calhoun**, Sand Springs, returned from an automobile tour over Kansas, Missouri and Arkansas late in September.

**Dr. and Mrs. T. W. Stallings**, Tishomingo, are visiting eastern points. While away Dr. Stallings will attend New York clinics.

**Dr. J. C. Mahr**, Oklahoma City, received one of the few captain's commissions issued to Oklahomans in the Medical Reserve.

**Drs. C. B. and Pauline Barker**, Guthrie, attended New York eye, ear, nose and throat clinics for six weeks during the summer.

**Dr. and Mrs. F. E. Rosenberger**, Grandfield, spent October and November in St. Louis, where Dr. Rosenberger took postgraduate work.



### DR. BENJAMIN F. FORTNER.

Dr. Benjamin F. Fortner, for many years the outstanding figure in the medical profession of Indian Territory and Eastern Oklahoma, died at his summer home near Rogers, Ark., September 23. He was 71 years old. The cause of death was angina pectoris, from which he had been a sufferer for some time past.

Dr. Fortner was one of the remarkable men of our profession. If there was such a man as a natural surgeon, the term would apply fittingly to him. During his life he occupied a place second to none in the hearts and estimation of his neighbors, both as a citizen and physician, and his worth as an advisor and consultant is attested by scores of friends among the physicians whose pleasure and privilege it was to know him. One of the earliest practitioners of Indian Territory he rapidly achieved a reputation which reached into the neighboring states. He was honored by many posts of honor during a busy life. He was the first president of Indian Territory Medical Association, elected to that office in May, 1899, and also the first president of the merged Indian and Oklahoma Territory Association, elected to that office at Oklahoma City in May, 1906. During his professional career he was constantly surgeon for the M. K. & T. and Frisco railways, later moving to Springfield, Mo., where he was in charge of the Frisco Hospital at that point. He was on the Cherokee National Board of Medical Examiners at different times and later a member of the Northeastern Federal District Board of Examiners. He established the first hospital at Vinita, and, it is said, took such personal interest in it that on his visits he would go about inspecting every little thing as a connoisseur would a rare article or exhibit he loved. His keen sympathy with the problems of humanity was evidenced in many ways, yet at no time did he ever swerve from the right, and civically, politically and professionally he was always to be found a staunch man pioneering the wavering to the paths of right and propriety. His remains were interred at Vinita.

Dr. F. L. Keeler, Perry, has been appointed county superintendent of public health of Noble county, vice Dr. Bruce Watson, deceased.

Dr. L. A. Hahn, Guthrie, who has been appointed Chief Surgeon of the M. E. Hospital, spent a month recently visiting the Chicago clinics.

Dr. S. R. Cunningham, Oklahoma City, is the defendant in a \$10,000.00 suit for damages for alleged malpractice, the action being based on a fracture case.

Dr. Will Jackson, Vinita, was tendered a banquet recently by the Craig County Medical Society on his departure for entrance in the Army Medical Reserve Corps.

Dr. L. C. White, Adair, was shot in a store in his town by one of the county commissioners recently, the ball entering the hip and not producing a dangerous condition.

McAlester Health Officials are contemplating the closure of public schools to combat scarlet fever. In the event the order is made it will include Sunday Schools and picture shows as well.

Drs. W. W. and Eva Wells, Oklahoma City, are attending clinics in New York, Chicago and other eastern points. They traveled via New Orleans and from that point made the trip by boat.

Dr. A. H. Yates, Konowa, is again under arrest, the second in two months, charged with having performed an illegal operation on Katherine Cross, an 18 year old girl, which resulted in her death.

Dr. M. M. Roland, radiologist of Oklahoma City, lately commissioned in the Medical Reserve, has been ordered to Cornell where he will receive special instruction in the problems of War surgery.

Dr. Wm. D. Berry, Muskogee, whose name appeared in the October list as commissioned in the Medical Reserve Corps, has declined the commission, according to Surgeon General's Office information.

Dr. Emma Starr Keith, School Inspector for Muskogee, has issued a neat chart of the communicable diseases, which she mailed to each physician with the request that isolation, quarantine, reporting, etc., conform to the instruction.

Automobile stealing is becoming such a common practice in Oklahoma and their recovery so rare, that it would be well for physicians to have their cars fitted with special locks to circumvent the busy gentry who cause so much trouble by theft.

Dr. T. W. Brewer, health officer of Miami, in making his first report states general conditions as to infectious diseases good, but takes a rap at the lack of sewer connections, unclean streets, etc. He recommends inspection of shops by police officials.

The State Committee on National Defense calls attention to the disparity of medical men seeking commissions from certain localities. They think, and rightly so, that applications should be fairly equitable as between the different localities of the State and that every community having a fair representation in the profession should send its approximate quota to the Army Medical Department. If the estimates of the Surgeon General as to the number we should supply is correct, certain towns are not sending their proportion forward. In those localities physicians should ponder this matter thoroughly.

**DR. SAMUEL B. GROWDON.**

Dr. Samuel B. Growdon, President of the Alfalfa County Medical Society, died at his home in Cherokee, Oklahoma, August 9, 1917, at the age of 56 years. He was born in Pennsylvania in the year 1861, took his medical course in the University of Louisville, graduating in the class of 1899. Since which time he had been in the active practice of medicine up to the time of his death.

**Dr. J. J. Williams**, Weatherford, has been elected secretary of the State Board of Medical Examiners, vice Dr. R. V. Smith, Tulsa, who has entered the Medical Reserve. Dr. Williams was formerly a member of the Oklahoma Senate and is well versed as a physician in the complexities of Oklahoma medical law.

**Dr. A. L. Blesh**, Major, Medical Officers Reserve Corps, Chief of Surgical Service, Base Hospital Number One, Ft. Sam Houston, Texas, is the proper way to address letters now to Dr. A. L. Blesh, who has been promoted to the rank of Major from Lieutenant since his entrance to the army. We congratulate Dr. Blesh on this deserved acknowledgment of his ability.

**Dr. LeRoy Long**, Oklahoma City, will receive his salary as medical advisor to the Industrial Commission, according to a decision of the District Court of Oklahoma County. The State Auditor sought to refuse payment on the ground that Dr. Long was already the recipient of a tremendous salary as Dean of the Medical Department of the University, but the District Judge pulled the fangs out of the contention.

**Dr. F. H. Clark**, El Reno, who was recently commissioned Major in the Medical Reserve Corps and ordered to Ft. Oglethorpe, Ga., is not a stranger to the military game. For many years he was connected with the Oklahoma National Guard and prior to that had connection with the Kansas National Guard. It is not generally known that Dr. Clark underwent a rather severe operation in order to qualify for entrance to the Army.

**Medical Reserve Corps Commissions Issued.** Supplementary List, Sept. 16 to 29, inclusive: Herman August LaForce, Blair; James Elston Adams, Chandler; William Brown Harned, Chattanooga; Loren Cecil Presson, Collinsville; Charles Hicks Howell, Frederick; Thomas Junior Nunnery, Granite; Clyde Ferdinand Loy, Guthrie; Samuel Sherman Widener, Jefferson; Oscar Johnston Street, Louis; Bruce Younger, Marietta; Richard Emmet Thacker, Norman; John Charles Mahr, Oklahoma City; Simon Ernest Strader, Oklahoma City; Duke William Vincent, Oklahoma City; Walter Norris Sykes, Ramona; Hardin Walker, Rosston; Lisby Lucius Wade, Ryan; James Bee Ferguson, Sallisaw; Edgar Augustus Jones, Sayre; Thomas Lee Chambliss, Soper; Marion McDowell Webster, Stratford; Joel Samuels Hopper, Tulsa.

**On the Death of Dr. Jos. C. Johnstone.** The following resolution was adopted by the City Society of Physicians, of Blackwell, Okla., at a meeting held Monday, Oct. 8th, 1917:

*Whereas*, It has pleased the Great Physician to call from our midst our colleague, Dr. J. C. Johnstone, we the physicians of Blackwell wish to express our appreciation of his efforts among us to further the interests and increase the efficiency of our profession. In his brief stay with us he has won our admiration by his quiet, but brave fight with disease, and we, his brother practitioners hereby extend to the members of Dr. Johnstone's family our sincere regret of his early death, and we further desire to express the faith that his influence for good is still active among us.

Dr. V. A. Wood,  
Dr. Allen Lowery,  
Dr. A. S. Risser,  
Com. on Resolutions.

**COUNTY SOCIETIES**

**Washington County** held its first meeting September 11th, at which meeting the members indulged in vacation reveries and experiences. A complete program for the season beginning September 25 and ending May 28 was adopted; each member having been detailed for some future date.

**Muskogee County** held its first meeting after the summer vacation October 8th. The papers read were "Birth Control," Dr. H. T. Ballantine, "Medical Inspection of Schools," by Dr. Emma Starr Keith, School Inspector for Muskogee. A tentative arrangement was entered into by which indigent school children needing surgical and medical treatment to overcome defects will be attended to by a committee of physicians selected for that purpose from the society's membership.

## MISCELLANEOUS

### FROM THE OKLAHOMA STATE BOARD OF HEALTH, OKLAHOMA CITY.

Dr. John W. Duke, Commissioner.

#### HEALTH AND PATRIOTISM.

During the years immediately preceding the war there was a growing appreciation of the value of good health in increasing personal efficiency. Along many industrial and economic lines the demands for a higher grade of efficiency was increasing. Many great corporations were insisting on medical examinations of employees and would be employees. It was becoming impressed upon people that poor health not only added to the discomforts of the individual but was a direct impediment to employment and progress.

Since the entry of America into the great war the demand for personal efficiency, the obligation on the individual to make the most of himself is greater than ever. The pick of American manhood has been and will be drawn for active service. They will do their duty, there is no fear on that question. But an equal duty is laid on those at home. This is a war not of armies, but of nations. It is incumbent upon every man and woman to do his or her share and this is only possible if the individual maintains good health.

The rules for good health are simple. Except for persons who are afflicted with some specific and serious disease good health is largely a matter of good habits. Plenty of nourishing food of sufficient variety, regulated exercise, pure air, the avoidance of unnecessary worry, will keep the average individual in good health. With this should go physical examination by a competent physician at not too long intervals in order to detect incipient or latent ailments and prevent their development.

#### TO AVOID COLDS.

There is no ailment so common as colds and far too great a disposition on the part of the public not to appreciate their possible seriousness. Most colds are unnecessary. They are due to infection conveyed by certain germs and while to a certain extent it may be said that these germs are ever present, yet the resistance of the physical system can be increased so as to render them largely innocuous.

One of the best protections against the "catching of colds" is the daily cold bath. This makes the body less susceptible to the danger of infection. The danger of cold from "drafts" has been greatly exaggerated. If persons will accustom themselves to plenty of fresh air, they will seldom be affected by drafts. Constipation tends to render a person more liable to colds.

It should also be remembered that colds are to a great extent infectious, conveyed from one person to another. It will often be noticed that one person in a household will have a cold, then often another and another until all in the house have been affected. This does not mean that a person with a cold should be avoided, or treated as if suffering from a serious infectious disease, but it does mean that precautions should be observed in regard to coughing, sneezing, and other ways by which the infection can be most readily conveyed.

### FROM UNITED STATES FOOD ADMINISTRATION, NORMAN, OKLAHOMA.

#### WHY THE ALLIES MUST HAVE WHEAT INSTEAD OF CORN.

There are three main reasons why the allies must have wheat instead of corn. First, we cannot ship meal to them because it will spoil. Second, the allied powers have no corn mills with which to grind the whole corn. Third, they have all their bread baked in public ovens, and corn bread cannot be distributed from bakeries. This is particularly true when we consider distributing corn bread to the soldiers; it will be cold and crumbled. Thus, from necessity we must supply our allies with more wheat. The only way to do this is for us to use less wheat. We must substitute one pound of corn or other cereal flour for one pound of wheat flour each week per person. This will enable us to supply our allies with enough wheat to carry on the war.

#### COUNCIL ON PHARMACY AND CHEMISTRY.

During September the following articles have been accepted by the Council on Pharmacy and Chemistry for inclusion with New and Non-official Remedies:

**The Abbott Laboratories:** Chlorinated Eucalyptol-Dakin; Chlorinated Paraffin Oil-Dakin; Dichloramine-T, Abbott; Halazone-Abbott; Halazone Tablets-Abbott.

**General Laboratories:** Hyclorite.

**Schering and Glatz:** Camiofen Ointment.



## NEW AND NON-OFFICIAL REMEDIES.

**Concentrated Solution Sodium Hypochlorite-Mulford.**—A 5 per cent aqueous solution of sodium hypochlorite containing free chlorine equivalent to 0.2 to 1.0 per cent of sodium hypochlorite. One volume is diluted with nine volumes of water and the amount of boric acid required (stated on the label) to render the solution neutral is added. This dilution is used in the irrigation method of treating infected wounds. The H. K. Mulford Company, Philadelphia, Pa. (*Journal A. M. A.*, Sept. 1, 1917, p. 727).

**Calcreose.**—A mixture containing approximately equal weights of creosote and lime in chemical combination. It is stated that, when administered internally, calcreose has the same actions as creosote. It is claimed that it is not likely to produce gastric distress, nausea or vomiting. Calcreose is sold in the form of powder, as Solution Calcreose and as Calcreose Tablets, 4 grains. The Maltbie Chemical Co., Newark, N. J.

**Betanaphthol Benzoate-Calco.**—A brand of betanaphthol benzoate, complying with the New and Non-official Remedies standards. The Calco Chemical Co., Bound Brook, N. J. (*Journal A. M. A.*, Sept. 8, 1917, p. 821.)

**Thiocol-Roche.**—Thiocol is the potassium salt of orthoguaiacol sulphonic acid, obtained by sulphonating guaiacol. Thiocol-Roche acts as a sedative expectorant. It has the advantage over guaiacol in that it is comparatively tasteless, does not disturb digestion and is non-toxic. It is claimed to be useful in the treatment of diseases of the respiratory tract, incipient tuberculosis and certain diarrheas. Thiocol-Roche is supplied in the form of a powder, as Syrup-Thiocol and as Thiocol-Roche Tablets, 5 grains. The Hoffman-LaRoche Chemical Works, New York. (*Journal A. M. A.*, Sept. 15, 1917, p. 911.)

**Dichloramine-T, Abbott.**—Paratoluenesulphonedichloramide. This is said to act much like chlorazene, but capable of being used in solution in eucalyptol and liquid petrolatum, thus securing the gradual and sustained antiseptic action. Like chlorazene, dichloramine-T, Abbott, is said to act essentially like the hypochlorites, but to be less irritating to the tissues. Dichloramine-T, Abbott, is said to be useful in the prevention and treatment of diseases of the nose and throat. It has been used with success as an application to wounds, dissolved in chlorinated eucalyptol and chlorinated paraffin oil. The Abbott Laboratories, Chicago.

**Chlorinated Eucalyptol-Dakin.**—Eucalyptol chlorinated at ordinary temperature. It is used as a solvent for dichloramine-T. The Abbott Laboratories, Chicago.

**Chlorinated Paraffin Oil-Dakin.**—Liquid petrolatum, chlorinated at ordinary temperature. It is used as a diluent for solutions of dichloramine-T in chlorinated eucalyptol-Dakin. The Abbott Laboratories, Chicago.

**Hyclorite.**—A solution of chlorinated soda, each 100 gm. being stated to contain sodium hypochlorite 4.05 gm., sodium chloride 3.20 gm., calcium hydroxide 0.25 gm., inert salts 0.92 gm., It contains not less than 3.85 per cent. available chlorine. Hyclorite has the action and uses of solution of chlorinated soda, U. S. P., but its available chlorine content is greater. One volume of hyclorite diluted with seven volumes of water has the same available chlorine content as neutral solution of chlorinated soda-N. N. R. and is said to be isotonic. The available chlorine content of hyclorite decreases at the rate of about 12 per cent per year. In order that allowance for this deterioration may be made in the preparation of dilutions to be used in the irrigation treatment of wounds, each bottle of hyclorite bears the date of bottling. The General Laboratories, Madison, Wis. (*Journal A. M. A.*, Sept. 29, 1917, p. 1081).

## PROPAGANDA FOR REFORM.

**Chamley, Cancer Quack.**—S. R. Chamley, sometime spelling his name Chamlee, is the "cancer cure" quack who frightens impressionable women into the belief that "any lump in woman's breast is cancer." In spite of repeated prosecutions by the postal authorities, he is still active. Now he offers to instruct homeopaths and eclectics in the "cancer cure" business. Chamley asks that mail be sent to "Homeopathic Cancer College," Los Angeles, Cal. (*Journal A. M. A.*, Sept. 1, 1917, p. 749.)

**Bon-Opto.**—Bon-Opto is advertised to make weak eyes strong. The following non-quantitative and meaningless formula is furnished: "Chloretone, Zinc Sulphate, Sodium Chloride, Boric Acid, Menthe Poivre, Camphre de Menthe." The state chemists of New Hampshire report that Bon-Opto contains: sodium chlorid (common salt) 39.52; zinc sulphate (white vitriol) 6.83; boric acid 39.69; menthol, a small amount. (*Journal A. M. A.*, Sept. 1, 1917, p. 750.)

**Wilson's Wa-Hoo Bitters.**—"C. K. Wilson's Original Wa-Hoo Bitters" was sold as a "Great Blood and Nerve Tonic" and as an unfailing specific for partial paralysis, St. Vitus Dance and all forms of weakness. Federal chemists reported the product to be a watery solution (slightly sweetened) of Epsom salt, salicylic acid and a laxative plant drug with indications of sassafras, gentian and prickly ash. The therapeutic claims were declared false and fraudulent by the government authorities. (*Jour. A. M. A.*, Sept. 1, 1917, p. 750.)

**Ferrivine, Intramine and Collosol Iodine.**—The Council on Pharmacy and Chemistry reports that Ferrivine, Intramine and Collosol Iodine, sold in the United States by E. Fougera and Co., Inc., were found inadmissible to New and Non-official Remedies. Ferrivine and Intramine are advertised for the treatment of syphilis, while Collosol Iodine, mercuric and iodides are recommended as adjuvants.

A carefully controlled clinical trial<sup>2</sup> made<sup>3</sup> by L. W. Harrison and C. H. Mills and reported in the *Lancet* indicated that Ferrivine and Intramine are inefficient as spirocheticides and that the local and general reactions that follow the injection are severe. They say that in the case of Intramine "the pain is undiluted torture." (*Journal A. M. A.*, Sept. 8, 1917, p. 841.)

**Tyramin as an Adjunct to Morphin in Labor.**—Henry G. Barbour, Yale University Medical School, aided by a grant from the Therapeutic Research Committee of the Council on Pharmacy and Chemistry, has studied the effects of tyramin on the action of morphin in labor. In labor morphin exhibits one desirable effect, analgesia, and two untoward results, namely, respiratory depression in the child and delay of labor. Experimental work at Yale having given no support to the use of scopolamin as an adjunct to morphin in labor, tyramin and similar bodies were studied. Animal experiments demonstrated that tyramin (para-hydroxy-phenyl-ethyl-amin-hydrochlorid) counteracted the respiratory depression of morphin. In man, from 40 to 50 mg. of tyramin, administered simultaneously with a therapeutic dose of morphin of 16 mg., completely antagonized the depressant action of morphin on the respiration. The effects of morphin-tyramin on normal labor is being studied at Yale. So far it appears that analgesia is as complete as if morphin were given alone. The respiration of the mother is increased rather than depressed and the condition of the children is quite satisfactory. Further, the uterine contractions have always been increased in frequency and in degree. (*Journal A. M. A.*, Sept. 15, 1917, p. 882.)

**Musterole Poisoning.**—D. I. Macht reports the case of a scarlatiniform eruption, evidently caused by an application of Musterole, a proprietary composed essentially of lard or some similar material, oil of mustard, menthol and camphor. Macht reports on the effects of mustard oil and warns against its careless use. (*Journal A. M. A.*, Sept. 15, 1917, p. 901.)

**Emetin Diarrhea.**—Emetin not rarely produced a bloody diarrhea in the course of its clinical use in the treatment of amebic dysentery. The symptoms and the gross appearance of the stools in emetin diarrhea are almost indistinguishable from those of amebic dysentery. Contrary to a prevalent opinion, children are not especially resistant to the effects of emetin and the dosage for them must be graduated with great care. (*Journal A. M. A.*, Sept. 15, 1917, p. 916.)

**Spurious Neosalvarsan.**—"Dr." Nicholas Clements is under indictment in New York City for manufacturing and selling imitation neosalvarsan. The material was put up in packages made to resemble in outward appearance the genuine article. It proved to be common salt colored yellow. (*Jour. A. M. A.*, Sept. 15, 1917, p. 930.)

**Pierce's Anuric Tablets.**—According to the World's Dispensary Medical Association, Anuric is the newest discovery in chemistry, whereas, in fact, it is a worthless and dangerous nostrum sold as a cure for kidney disease. The A. M. A. Chemical Laboratory reports that from a qualitative analysis, Anuric Tablets contained sugar, acetate, iodid and salicylate of either sodium or potassium, quinine, aloin, hexamethylenamin and plant drugs. The composition of the tablets was so evidently irrational and absurd that an exhaustive analysis was not deemed worth while. (*Journal A. M. A.*, Sept. 15, 1917, p. 930.)

**Venarsen.**—F. A. Brayton used Venarsen in a series of active syphilites to determine its therapeutic value. The clinical study was made because many physicians consider this sodium cacodylate preparation as an efficient substitute for salvarsan, even referring to it as "Denver salvarsan." His study confirms the experiences of others, namely, that Venarsen is worthless in the therapy of syphilis. He also reports that a venous sclerosis was produced in each case in which the drug was administered and that it is capable of producing a severe nephritis. (*Journal Ind. State Med. Assn.*, Sept. 15, 1917, p. 339.)

**Volatile Irritants in Collapse.**—To determine the action of so-called circulatory stimulants that are commonly administered by subcutaneous injection in shock or allied conditions, Lieb and Herrick have studied the effects of injections of alcohol, ether, camphor and ether, camphor and oil, and turpentine in animals decerebrated so that the pain factor would be entirely excluded. They conclude that the transitory rise in blood pressure that these medicaments produce is entirely reflex in character. The heart plays little or no part in the process, the response being effected through the vasomotor apparatus. The use of injections of camphor in oil, or camphor in alcohol, to stimulate an anesthetized or profoundly prostrated or unconscious patient, therefore, has no experimental justification and its employment is seriously to be questioned. (*Journal A. M. A.*, Sept. 22, 1917, p. 1008.)

**Wheeler's Tissue Phosphates.**—A leaflet devoted to the exploitation of Wheeler's Tissue Phosphates approvingly quotes the criticisms of the hypophosphites and the glycerophosphates by the *Journal A. M. A.* However, the leaflet fails to quote the *Journal's* estimate of the "Tissue Phosphates" which was: "Wheeler's Tissue Phosphates" is an unscientific shotgun mixture whose most active and powerful drug is the alcohol it contains. That it was not years ago relegated to the realms of obsolete and discarded preparations is a commentary alike on the lack of scientific discrimination and on the power of advertising." (*Journal A. M. A.*, Sept. 22, 1917, p. 1010.)

**Ammonol.**—The New York Medical Journal advertises Ammonol as "The Stimulant, Ethical Antipyretic and Analgesic." There we learn, in part, that this very ordinary mixture of acetanilid, ammonium carbonate and sodium bicarbonate is "a specific in Fevers, Neuralgia, Atonic Dyspepsia, Pneumonia, Gastralgia, Bronchitis, Coryza, Catarrhal Influenza, La Grippe, Rheumatism, Hysteria, Alcoholism, Amenorrhea, Dysmenorrhea, Uterine and Intestinal Colic, Obstinate Vomiting, Catarrh of the Bile Ducts and Jaundice." (*Journal A. M. A.*, Sept. 22, 1917, p. 1010.)

**Fake Neosalvarsan.**—The department of Health of the City of New York has prepared a table whereby the spurious "neosalvarsan," recently located there may be identified. The department urges



physicians to destroy all salvarsan and neosalvarsan containers after use of the drug, to prevent illegitimate use of these containers. (*Journal A. M. A.*, Sept. 22, 1917, p. 1021).

**"Nikalgin."**—A recent issue of Collier's contains an article on "Nikalgin." Far-reaching claims for its anesthetic and antiseptic virtues have been made. While no very definite information seems to be forthcoming regarding the preparation, it has been said to be "composed of quinine, hydrochloric acid and urea." This would indicate that "Nikalgin" may be nothing more wonderful than the well known local anesthetic, quinine and urea hydrochloride, or a modification of it. (*Journal A. M. A.*, Sept. 22, 1917, p. 1024).

**American-Made Synthetics.**—The Council on Pharmacy and Chemistry announces that, with the aid of the A. M. A. Chemical Laboratory, it proposes to make a study of the quality of American-made synthetics. This control of synthetic drugs, which as a result of the war are now made in this country, is believed to be in the interest of the American industry, for the protection of the public and for the satisfaction of physicians. Since the manufacture of some of the synthetic drugs is to some extent experimental in this country, the Council feels confident that the responsible manufacturer will welcome this study as the best way of establishing complete confidence in his products. (*Journal A. M. A.*, Sept. 22, 1917, p. 1018).

**Eskay's Neuro Phosphates.**—The Council on Pharmacy and Chemistry reports that Eskay's Neuro Phosphates (Smith, Kline and French Co., Philadelphia) is claimed to contain alcohol 17 per cent and sodium glycerophosphate 2 grains, calcium glycerophosphate 2 grains, strychnine glycerophosphate 1-64 grain, in each dessertspoonful. It is called a "Nerve Tissue Reconstructive" and the advertising claims are based on the discredited theory that certain disorders are due to a deficiency of phosphorus in the nerve structures of the body, and that glycerophosphates are assimilated more readily than ordinary phosphates. The Council held Eskay's Neuro Phosphates ineligible for New and Non-official Remedies because of the unwarranted therapeutic claims made for it, because the combination is irrational and because the name is not descriptive of its composition. (*Journal A. M. A.*, Sept. 29, 1917, p. 1102).

**K-Y Lubricating Jelly.**—The Council on Pharmacy and Chemistry reports that K-Y Lubricating Jelly (Van Horn and Sawtell, New York) originally advertised as a lubricant for instruments and the hands, is now also recommended as a therapeutic agent. The Council held K-Y Lubricating Jelly in conflict with Rules 1, 4, 6 and 10. (*Journal A. M. A.*, Sept. 29, 1917, p. 1102.)

## NEW BOOKS

### THE PRESCRIPTION.

Therapeutically, Pharmaceutically, Grammatically and Historically Considered, by Otto A. Wall, Phg., M. D., Professor of Materia Medica Pharmacognosy and Botany, St. Louis College of Pharmacy; Member of the Committee for the Revision of the Pharmacopoeia of the United States in 1880-1890 and 1890-1900, etc. Fourth edition, revised, illustrated. Cloth 274 pages. Price \$2.50. C. V. Mosby Company, St. Louis.

This book deals with a subject notoriously neglected by many physicians. It considers the history, traditions and evolution of the prescription from earliest times to the present day of complex materia medica; the day, when if one would avoid error in prescribing, his knowledge of medicines, their compatibilities and the messes the pharmaceutical houses insist on thrusting on the physician, must be most thoroughly understood. The work should appeal to the student, the beginner and the man often too hurried to delve through a library hunting up some unusual point.

### DISEASES OF THE SKIN.

By Richard L. Sutton, M. D., Professor of Diseases of the Skin, University of Kansas School of Medicine; Formerly Chairman of the Dermatological Section of the American Medical Association; Member American Dermatological Association; Assistant Surgeon, United States Navy, Retired; Dermatologist to the Christian Church Hospital. 833 illustrations, with eight colored plates; Second edition, revised and enlarged. Cloth, price \$6.50. C. V. Mosby Company, St. Louis.

The work of Sutton is rapidly being ranked as one of the best on skin affections in this country. This edition is an improvement over the first edition in that it considers Gangrenous Balanitis, Atrophy of the Mucous Membranes of the Tongue and Mouth and Atrophy of the Fatty Layer of the Skin. Other articles are rewritten and many new illustrations have been added.

### THE ROENTGEN DIAGNOSIS OF DISEASES OF THE ALIMENTARY CANAL.

The Roentgen Diagnosis of Diseases of the Alimentary Canal. By Russell D. Carman, M. D., Head of Section on Roentgenology, Division of Medicine, Mayo Clinic, and Albert Miller, M. D., First Assistant in Roentgenology at the Mayo Clinic. Octavo of 558 pages with 504 original illustrations. Philadelphia and London: W. B. Saunders Company, 1917. Cloth \$6.00 net; Half Morocco \$7.50 net.



This is a text of 558 pages of good legible type on a good grade of paper. The contents are well arranged with an accurate and complete index, making it a valuable book for reference. The 504 clear and distinct original illustrations make the work especially valuable for students and demonstrators. The authors have shown wisdom in not trying to cover the entire field of Roentgenology in a single work, thus giving ample room to cover the subject matter considered very admirably.

M. M. Roland.

#### THE TREATMENT OF WAR WOUNDS.

**The Treatment of War Wounds.** By W. W. Keen, M. D., LL.D., Emeritus Professor of Surgery, Jefferson Medical College, Philadelphia. 12mo of 169 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1917. Cloth \$1.75 net.

A valuable little monograph on wounds peculiar to war. While general principles are laid down much of the work takes up the consideration of the newer things evolved by the needs of the present conflict in Europe. Many ingenious hints for temporary relief, the management of the wounded on the field, improvising movements of the wounded and ambulance improvising is shown. Of course the application of Dakin's solution and similar new procedures is considered.

#### "NOSTRUMS FOR KIDNEY DISEASES AND DIABETES."

Prepared and issued by the Propaganda Department of The Journal of the American Medical Association. 47 pages; deals with 34 nostrums; illustrated. American Medical Association, 535 North Dearborn St., Chicago. Paper, 10 cents postpaid.

This is the latest pamphlet issued by the Propaganda Department of The Journal of the American Medical Association as part of its work in giving the medical profession and the public the facts regarding different phases of the nostrum evil and quackery. Nostrums for kidney disease and diabetes are grouped together in one pamphlet, not because there is any essential relation between diabetes and kidney disease, but because the average quack makes no distinction between the two conditions and recommends his nostrum indiscriminately for both. It is not necessary to tell physicians that drugs will not cure either kidney disease or diabetes but it is necessary to apprise the public of this fact. Whatever justification there may be for the sale of home remedies for self-treatment, there is no excuse, either moral or economic, for selling preparations recommended for the self-treatment of such serious conditions as diabetes and kidney disease. Every "patent medicine" sold for the cure of these diseases is potentially dangerous and inherently vicious. The pamphlet is an interesting and instructive one to put in the hands of the layman.

#### HISTORY OF MEDICINE.

**History of Medicine.** Suggestions for study and Bibliographic Data, By Fielding H. Garrison, A. B., M. D., Principal Assistant Librarian, Surgeon General's Office, Washington, D. C., second edition revised and enlarged. Octavo of 905 pages with many portraits. W. B. Saunders Company, Philadelphia and London, 1917. Cloth \$6.50 net; Half Morocco \$8.00 net.

This edition is considerably improved over the first. While our former criticism on the omission of the names of John A. Wyeth and A. J. Oschner still stands, it must now be modified some, for allusion is made to the establishment of polyclinics and that word is so indelibly associated with the name of Wyeth that he is mentioned in connection with them as a matter of necessity.

In view of the outstanding importance now accredited the medical profession in all fields of war, it seems to us that it would be fitting to include the names of John Blair Gibbs, who we believe was a Marine Surgeon, and who died with the honorable distinction of having been the first man killed on Cuban soil, and that of Dr. Fitzsimmons, who was the first American member of our expeditionary forces to lose his life in France. These names deserve mention for their historical value. It is well for physicians not to forget these deaths, nor should they neglect proper opportunity to call the attention of the people to them.

The book is a very readable one and should be in the library of every physician as an inspiration to better work.

#### FOR SALE—EXCHANGE

**SPECIALIST'S OFFICE EQUIPMENT FOR SALE.**—Mrs. C. B. Clarke, 119 D St. N. W., Ardmore, announces that she has for sale the office equipment of her husband, Dr. C. B. Clarke, deceased. The office equipment in its entirety is modern and up-to-date in every respect. Those contemplating purchasing such supplies should write Mrs. Clarke.

**ESTABLISHED PRACTICE FOR PRICE OF OFFICE EQUIPMENT.** I have a well established practice in a live southern Oklahoma town and wish to specialize. I want some live doctor to take my place for the price of my office outfit. Will sell residence if desired. Address A. B. C., care Journal.

## OFFICERS OF OKLAHOMA STATE MEDICAL ASSOCIATION.

Meeting Place—Tulsa, May, 1918.

President, 1917-18—Dr. W. Albert Cook, Tulsa.

President-elect, 1918-19—Dr. L. S. Willour, McAlester.

1st Vice-President—Dr. McLain Rogers, Clinton.

2nd Vice-President—Dr. G. F. Border, Mangum.

3rd Vice-President—Dr. Horace Reed, Oklahoma City.

Secretary-Treasurer-Editor—Dr. C. A. Thompson, Muskogee.

Delegate to the A. M. A., 1918-19—Dr. Chas. R. Hume, Anadarko.

Delegate to the A. M. A. 1917-18—Dr. M. A. Kelso, Enid.

## COUNCILOR DISTRICTS.

1. Cimarron, Texas, Beaver, Harper, Ellis, Woods and Woodward; Councilor, Dr. J. M. Workman, Woodward. Term expires 1919.
2. Roger Mills, Beckham, Dewey, Custer, Washita and Blaine; Councilor, Dr. Ellis Lamb, Clinton. Term expires 1920.
3. Harmon, Greer, Jackson, Kiowa, Tillman, Comanche and Cotton; Councilor, Dr. G. P. Cherry, Mangum. Term expires 1918.
4. Major, Alfalfa, Grant, Garfield, Noble and Kay; Councilor, Dr. G. A. Boyle, Enid. Term expires 1919.
5. Kingfisher, Canadian, Oklahoma and Logan; Councilor, Dr. Fred Y. Cronk, Guthrie. Term expires 1918.
6. Caddo, Grady, McClain, Garvin, Stephens and Jefferson; Councilor, Dr. C. M. Maupin, Waurika. Term expires 1919.
7. Osage, Pawnee, Creek, Okfuskee, Okmulgee and Tulsa; Councilor, Dr. N. W. Mayginnnes, Tulsa. Term expires 1920.
8. Payne, Lincoln, Cleveland, Pottawatomie and Seminole; Councilor, Dr. H. M. Williams, Wellston. Term expires 1920.
9. Pontotoc, Murray, Carter, Love, Marshall, Johnston and Coal; Councilor, Dr. J. T. Slover, Sulphur. Term expires 1918.
10. Washington, Nowata, Rogers, Craig, Ottawa, Mayes and Delaware; Councilor, Dr. R. L. Mitchell, Vinita. Term expires 1918.
11. Wagoner, Muskogee, McIntosh, Haskell, Cherokee and Adair; Councilor, Dr. J. Hutchings White, Muskogee. Term expires 1920.
12. Hughes, Pittsburg, Latimer, LeFlore and Sequoyah; Councilor, Dr. Ed. D. James, Haileyville. Term expires 1920.
13. Atoka, Pushmataha, Bryan, Choctaw and McCurtain; Councilor, Dr. J. L. Austin, Durant. Term expires 1920.

## CHAIRMEN OF SCIENTIFIC SECTIONS.

**Surgery and Gynecology**—Dr. LeRoy Long, Oklahoma City.

**Pediatrics and Obstetrics**—Dr. T. C. Sanders, Shawnee.

**Eye, Ear, Nose and Throat**—Dr. L. A. Newton, Oklahoma City.

**General Medicine, Nervous and Mental Diseases**—Dr. A. B. Leeds, Chickasha.

**Genitourinary, Skin and Radiology**—Dr. W. J. Wallace, Oklahoma City.

**Legislative Committee**—Dr. Millington Smith, Oklahoma City; Dr. J. M. Byrum, Shawnee; Dr. W. T. Salmon, Oklahoma City.

**For the Study and Control of Cancer**—Drs. LeRoy Long, Oklahoma City; Gayfree Ellison, Norman; D. A. Myers, Lawton.

**For the Study and Control of Pellagra**—Drs. A. A. Thurlow, Norman; L. A. Mitchell, Frederick; J. C. Watkins, Checotah.

**For the Study of Venereal Diseases**—Drs. Wm. J. Wallace, Oklahoma City; Ross Grosshart, Tulsa; J. E. Bereaw, Okmulgee.

**Necrology**—Drs. Martha Bledsod, Chickasha; J. W. Pollard, Bartlesville.

**Tuberculosis**—Drs. L. J. Moorman, Oklahoma City; C. W. Heitzman, Muskogee; Leila E. Andrews, Oklahoma City.

**Conservation of Vision**—Drs. L. A. Newton, Oklahoma City; L. Haynes Buxton, Oklahoma City; G. E. Hartshorne, Shawnee.

**First Aid Committee**—Drs. G. S. Baxter, Shawnee; Jas. C. Johnston, McAlester.

**Committee on Medical Education**—Drs. A. L. Blesh; A. K. West; A. W. White, Oklahoma City.

**State Commissioner of Health**—Dr. John W. Duke, Guthrie, Oklahoma.

## STATE BOARD OF MEDICAL EXAMINERS.

J. J. Williams, President, Weatherford; J. J. Williams, Seey, Weatherford; M. Gray, Vice-Pres., Mountain View; O. R. Gregg, Treas., Freedom; W. T. Ray, Gould; H. C. Montague, Muskogee.

Reciprocity with Georgia, Kentucky, Mississippi, Nevada, North Carolina, Wisconsin, Kansas, Arkansas, Virginia, West Virginia, Nebraska, New Mexico, Tennessee, Iowa, Ohio, California, Colorado, Indiana, Missouri, New Jersey, Vermont, Texas, Michigan.

Meetings held second Tuesday of January, April, July and October, Oklahoma City.


Address all communications to the Secretary, Dr. J. J. Williams, Weatherford.

## OFFICERS OF COUNTY SOCIETIES

County	President	Secretary
Adair .....	J. Patton, Stilwell	A. J. Sands, Watts
Alfalfa .....	S. B. Growden, Cherokee	L. T. Lancaster, Cherokee
Atoka .....		
Beaver .....		
Beckham .....	J. E. Yarhrough, Erick	K. R. Rone, Elk City
Blaine .....	M. W. Buchanan, Watonga	J. A. Norris, Okeene
Bryan .....	J. H. Shuler, Durant	D. Armstrong, Mead
Caddo .....	W. T. Hawn, Binger	C. R. Hume, Anadarko
Canadian .....	P. F. Herod, El Reno	W. J. Muzzy, El Reno
Choctaw .....	V. L. McPherson, Boswell	E. R. Askew, Hugo
Carter .....	J. C. Best, Ardmore	R. H. Henry, Ardmore
Cleveland .....	J. M. Williams, Norman	Gayfree Ellison, Norman
Cherokee .....	W. B. Blake, Tahlequah	C. A. Peterson, Tahlequah
Custer .....	M. C. Comer, Clinton	S. C. Davis, Clinton
Comanche .....	L. A. Milne, Lawton	G. Pinnell, Lawton
Coal .....	J. B. Clark, Coalgate	A. Cates, Tupelo
Cotton .....	M. T. Clark, Walters	G. O. Webb, Temple
Craig .....	C. S. Neer, Vinita	W. R. Marks, Vinita
Creek .....	C. D. Blachley, Drumright	H. S. Garland, Sapulpa
Dewey .....		
Ellis .....		
Garfield .....	W. L. Kendall, Enid	James H. Hays, Enid
Garvin .....	G. L. Johnson, Pauls Valley	N. H. Lindsey, Pauls Valley
Grady .....	E. L. Dawson, Chickasha	Martha Bledsoe, Chickasha
Grant .....		C. H. Lockwood, Medford
Greer .....	E. M. Poer, Mangum	T. J. Horsley, Mangum
Harmon .....		J. B. Hollis, Hollis
Haskell .....	M. VanMatre, Keota	J. R. Waltrip, Kinta
Hughes .....		
Jackson .....	D. C. Buck, Eldorado	W. H. Rutland, Altus
Jefferson .....	G. C. Wilton, Ryan	J. I. Derr, Waurika
Johnson .....	C. B. Ballard, Mannsville	H. B. Kniseley, Tishomingo
Kay .....		A. S. Risser, Blackwell
Kingfisher .....	C. E. Wagoner, Hennessey	Chas. W. Fisk, Kingfisher
Kiowa .....	Wm. McIlwain, Lonewolf	A. L. Wagoner, Hohart
Latimer .....		E. B. Hamilton, Wilburton
Le Flore .....	J. B. Beckett, Spiro	G. A. Morrison, Poteau
Lincoln .....		A. M. Marshall, Chandler
Logan .....	A. A. West, Guthrie	E. O. Barker, Guthrie
Love .....		
Mayes .....	J. E. Hollingsworth, Strang	W. C. Bryant, Choteau
Major .....		
Marshall .....	A. E. Ballard, Madill	O. E. Wellborn, Kingston
McClain .....	J. W. West, Purcell	O. O. Dawson, Wayne
McCurtain .....	A. S. Graydon, Idabel	C. R. McDonald, Broken Bow
McIntosh .....	N. P. Lee, Checotah	Wm. A. Tolleson, Eufaula
Murray .....	J. A. Adams, Sulphur	W. H. Powell, Sulphur
Muskogee .....	I. B. Oldham, Muskogee	J. G. Nohle, Muskogee
Noble .....		T. F. Renfrow, Billings
Nowata .....	J. E. Brookshire, Nowata	J. R. Collins, Nowata
Okfuskee .....	H. A. May, Okemah	J. M. Pemberton, Paden
Oklahoma .....	L. J. Moorman, Oklahoma City	F. B. Sorgatz, Oklahoma City
Okmulgee .....	N. N. Simpson, Henryetta	H. E. Brees, Henryetta
Ottawa .....	R. F. Von Cannon, Miami	G. P. McNaughton, Miami
Osage .....	J. M. Ennis, Pawhuska	Benj. Skinner, Pawhuska
Pawnee .....		E. T. Robinson, Pawnee
Payne .....	E. M. Harris, Cushing	J. B. Murphy, Stillwater
Pittsburg .....	J. O. Grubbs, McAlester	J. C. Johnston, McAlester
Pottawatomie .....	J. H. Scott, Shawnee	G. S. Baxter, Shawnee
Pontotoc .....	C. L. Orr, Ada	M. L. Lewis, Ada
Pushmataha .....		
Rogers .....	W. E. Smith, Collinsville	W. A. Howard, Chelsea
Roger Mills .....	W. S. Wimberly, Hammon	Lee Dorrab, Hammon
Seminole .....		W. L. Knight, Wewoka
Sequoyah .....	S. B. Jones, Sallisaw	T. F. Wood, Sallisaw
Stephens .....	E. B. Thomason, Velma	J. M. Nieweg, Duncan
Texas .....	W. H. Langston, Guymon	R. B. Hays, Guymon
Tulsa .....	A. W. Roth, Tulsa	W. Forest Dutton, Tulsa
Tillman .....	A. J. Hays, Frederick	J. E. Arrington, Frederick
Wagoner .....	F. W. Smith, Wagoner	S. R. Bates, Wagoner
Washita .....	D. W. Bennett, Sentinel	A. S. Neal, Cordell
Washington .....	W. E. Rammel, Bartlesville	J. G. Smith, Bartlesville
Woodward .....	Ralph Workman, Woodward	C. W. Tedrowe, Woodward
Woods .....	Isaac Hunt, Freedom	D. B. Ensor, Hopeton



# THE JOURNAL

*of*  *the*

## Oklahoma State Medical Association

VOLUME IX

MUSKOGEE, OKLA., DECEMBER, 1917

NUMBER 12

### ARTIFICIAL PNEUMOTHORAX IN THE TREATMENT OF PULMONARY TUBERCULOSIS.\*

L. J. MOORMAN, M. D., Oklahoma City, Okla.

Nearly a hundred years ago James Carson, an English physician, first suggested pneumothorax as a means of treating pulmonary tuberculosis. By experimenting with rabbits he demonstrated the fact that the lung could be compressed with comparative safety, and advised that the parietal pleura be punctured in phthisical patients with cavity formation, thus allowing the atmospheric air to compress the lung. About this time Ramadage also advocated compression in ulcerative phthisis.

Following these suggestions there is a long period of silence and not until 1885 do we again hear of artificial pneumothorax, when Caley advised compression of the lung for the control of hemorrhage. At about this date Potain in France employed artificial pneumothorax in the treatment of pulmonary tuberculosis. It is thought that Potain was the first to use nitrogen gas for compression. In 1882 Forlanini first advocated placing the diseased lung at rest, but as in the case of Potain he attracted little attention. Not until 1888 did he first introduce air into the pleural space and in 1894 he reported his first case treated by this means.

In 1898 J. B. Murphy in his oration on surgery before the American Medical Association in Denver created a sensation when he announced a method of treating pulmonary tuberculosis by compressing the affected lung with nitrogen gas. At the same time he reported five cases, three of which were so treated with great success, while two could not be collapsed on account of adhesions. Lemke, Murphy's pupil, later reported fifty cases.

In spite of these encouraging reports, this procedure did not become popular in America until after Brauer of Hamburg placed it upon a scientific basis.

In recent years artificial pneumothorax has been widely employed in this country, and the subject has occupied a prominent place in medical literature.

For want of space the apparatus employed and the technic are not discussed in this paper, but they may be found in any modern text dealing with the treatment of tuberculosis.

**Indications for Pneumothorax:** It is generally agreed that compression is particularly indicated in advanced cases, where the trouble is apparently limited to one side, and especially in those cases with high fever, marked toxemia, softening and cavity formation.

\*Read before the Oklahoma City Academy of Medicine.

In view of the fact that demonstrable pulmonary tuberculosis is seldom, if ever, limited to one lung and that many cases have been reported where pneumothorax in one lung has been followed by improvement in the other, bilateral involvement should not be considered as a contra-indication in cases where the usual hygienic, dietetic and rest treatment has failed to effect improvement. Pneumothorax should be considered in any case after persistent management and the usual therapeutic measures have failed.

In bilateral cases the side which shows the greater degree of involvement and activity is the one chosen for compression. In persistent or severe pulmonary hemorrhage not controlled by the usual methods of treatment, pneumothorax should be tried.

Some authors have advocated pneumothorax in the early stage of tuberculosis, arguing that if it proves beneficial in advanced cases it should be more beneficial in early cases. This teaching has not been accepted, chiefly because most early cases may be promptly arrested by the usual methods of treatment.

**Contra-Indications:** Compression is contra-indicated in chronic nephritis, in miliary tuberculosis, in intestinal tuberculosis and amyloid disease. Compression is often rendered incomplete or prevented entirely by the presence of pleural adhesions.

**Dangers:** The chief dangers and complications are as follows: Infection, pleural shock, air embolism and deep or superficial emphysema. Pleural effusion is quite common, and is usually serous in character, and of little significance, except in rare cases, where pressure symptoms demand the withdrawal of the fluid. With the present technic the dangers and complications are reduced to a minimum.

Complete compression is not accomplished at once but rather by introducing small quantities of gas (300 to 500 c.c.) at frequent intervals (three to six days). After several fillings with increasing intervals the lung is completely compressed and it may be so maintained by injections every three to four weeks. It is a most difficult matter to determine just when artificial pneumothorax may be safely discontinued. This is an important consideration because of the fact that a lung once compressed and then permitted to expand, can seldom, if ever, be compressed again on account of adhesions, which promptly form when the two layers of the pleura come in contact.

The average duration of treatment is one to two years. Many cases so treated are arrested or greatly improved, and the promptness with which some of the most harassing symptoms are relieved or benefited is most gratifying.

The following case report furnishes a striking example of what may be accomplished in some of the extremely toxic cases.

A young woman, age 22, saleslady, family and personal history unimportant. Present illness, contracted grip in December, 1916; was reduced in strength and flesh from this date, but continued to work. February 20, 1917, had first pulmonary hemorrhage. This was followed by eight successive hemorrhages covering a period of about ten days, and averaging about six ounces.

At this time a physical examination revealed only a limited area of involvement in the upper left lung. In spite of the usual hygienic, dietetic and rest treatment under the most favorable environment her condition progressed from bad to worse and the area of involvement gradually extended until it included the whole of the left lung. With the increasing toxemia the temperature showed a daily rise of three to four degrees with distressing anorexia and nausea and a consequent rapid decline in strength and flesh. On May 21st, artificial pneumothorax was accepted as a last resort. The accompanying chart shows the temperature curve before compression and the pronounced drop immediately following.

# THE OKLAHOMA COTTAGE SANATORIUM OKLAHOMA CITY

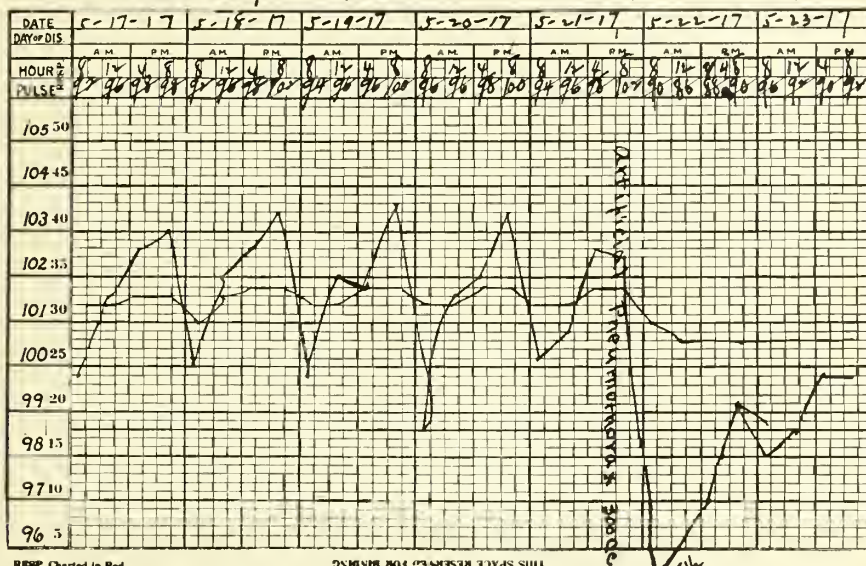
Hospital No. \_\_\_\_\_

Room No. \_\_\_\_\_

Name Miss Plung

Physician \_\_\_\_\_

Nurse \_\_\_\_\_



It seems reasonable to assume that this marked change in temperature was due chiefly to lessened toxemia since it has never gone above 100, with the exception of two or three days, since the first compression.

This assumption seems further justified by the fact that there has been a corresponding improvement in all the symptoms with a gain of eight pounds in weight and an equal gain in strength.

The usual technic was employed and compression accomplished by beginning with the introduction of 300 cc. of filtered air and gradually increasing the quantity at intervals of from five to ten days. She is now taking 1000 cc. every four weeks. The ultimate outcome in this case is still to be determined but if it should finally fail the satisfaction and comfort already derived should justify the means.

## CYSTITIS.

M. W. Lyon, Jr., Washington, D. C. (*Journal A. M. A.*, Oct. 20, 1917), reports a case of interest because it indicates the hemolytic properties of a colon bacillus, little mention of which occurs in medical literature. From a patient, an adult woman, who had an obscure bladder or kidney trouble, samples of catheterized urine were collected and tested by inoculation and culture observations on animals. The reactions of the isolated bacillus are given, one important point of interest being that it could not grow on agar like the ordinary colon bacillus, which is usually easy of cultivation. The writer quotes Schmidt as saying that the *Bacillus coli-hemolyticus* cannot be considered a well established variety and that, in his opinion, the hemolytic powers are accidental and not any special indication of pathogenicity. The inability to grow on agar, however, seems to show a high degree of specialization and adaptability on the part of the colon bacillus when what is an ordinary intestinal saprophyte can become so restricted in its habits as to need human blood or other complex proteins for its nutrition. Hexamethylenamin had no effect in restraining the organisms. Local and general treatment and the use of an autogenous vaccine caused marked improvement in the patient's condition.



## PREGNANCY AMONG THE TUBERCULOUS.

W. A. FOWLER, M. D., Oklahoma City.

Fortunately our conception of tuberculosis has been greatly clarified in recent years. The following are some of the interesting facts that have been established by clinical and post mortem findings: Most people become infected with tubercle bacilli in childhood, the lymph glands generally being the primary site of infection. In some cases there is rapid multiplication and dissemination of the bacteria and death ensues. In most cases, however, nature succeeds in more or less effectually walling off the infection, resulting in diminished virulence of the bacteria and increased body resistance. By the time adolescence is reached over 90 per cent of people have become infected, and the lungs have become involved in over 90 per cent of these infected cases. Here, after varying degrees of involvement, nature is again usually able to throw a protecting wall around the area or areas of infection.

Pathologically and clinically, we might recognize five classes of patients with which we are constantly dealing, so far as the question of tuberculosis is concerned: First, the class of patients, less than 10 per cent, who have never been infected—the normal cases; second, those patients who have had the infection which has been effectually walled off so that the system is not absorbing any of the toxins and is therefore free of all symptoms of the disease. In these cases the patient may never have been conscious of the infection. These are the latent cases. Physical examination will reveal in many of these cases definite signs at the site of the infection—perhaps slightly diminished respiratory movement, diminished resonance on percussion, slightly increased fremitus, and prolonged harsh expiratory sound. The von Pirquet test is tardily positive. The X-ray will show the area or areas of infection. A very high percentage of our patients fall in this class. Third: In this class we may consider those cases, almost, but not perfectly, walled off in which the patient is absorbing enough toxins to keep her from feeling well, but in whom the symptoms do not attract her attention to the chest as the seat of the pathology. These patients do not feel well, neither do they consider themselves really sick. There will be the symptoms of malaise, lack of endurance, nervous instability, slight loss of weight, tickling sensation in the throat, and slight aching pains at times about the neck, shoulders, or chest. The temperature, if taken every three hours, will be found to be fluctuating but generally below normal; the blood pressure is low; there may be hypertonus of the muscles about the neck or scapula on the affected side; the von Pirquet test is generally positive within 24 hours, but may be negative, and the same physical signs are present otherwise as in the second class. These cases will be diagnosed by only a most careful examination. They generally respond beautifully to treatment. These patients if undiagnosed usually continue for a number of months or a number of years until either the infection becomes walled off or it breaks through the defensive walls more freely, and the patient develops the symptoms of a more advanced infection. Careful routine general examination will reveal a much higher percentage of cases in this class than might be supposed. Fourth: In this class the process is simply a greater amount of activity than described in connection with the third class. There is pronounced cough, expectoration, and loss of weight. The physical signs are similar to those previously described with the addition of slight fever and the presence of rales on auscultation. The sputum may contain tubercle bacilli. This class of patients is generally spoken of as having incipient active tuberculosis. Fifth: In this class may be described the cases of advanced tuberculosis with extensive infiltration or cavity formation. The symptoms and signs are too well known to need description. A small percentage of cases will be found in the last two classes.

For practical purposes we should consider any tuberculous infection as an element of danger—that even in latent cases the tubercle bacilli are merely biding their time, should the defensive reserves of the system ever be sufficiently

drawn upon, that they may break through the barriers which nature has thrown around them and seriously menace the health and the life of the patient.

I have consumed much space and time with these details because I believe that it is only by having clearly in mind this primary conception of the pathology of tuberculosis that we will be the real conservators of the health and the lives of our patients. We are caring for many patients during pregnancy, labor, and the puerperium all the time who have latent and slightly active tuberculous lesions. It is in these conditions, if we discover them, that we are privileged to render our patients the greatest service. If we wait for the signs of more advanced infection to demand our attention while our patients are passing through the ordeal of pregnancy, labor, the puerperium, and lactation, many latent cases will become active and mildly active cases become advanced, and the confidence our patients impose in us will have been misplaced.

**Effects of Tuberculosis upon Pregnancy.** Tuberculosis is often accompanied by sterility, but has little effect upon pregnancy after pregnancy occurs.

**Effect of Pregnancy upon Tuberculosis.** There are many ways in which the function of reproduction may unfavorably affect tuberculosis. Unless the nausea and vomiting become troublesome, which is rarely the case in properly supervised pregnancy, there is little cause for any unfavorable effect during the course of pregnancy if the patient takes the required amount of rest, fresh air, and proper food. The shock of prolonged pain and dread of pain and of traumatism; the physical exertion; the loss of blood incident to labor and the puerperium; and, finally, the prolonged drain upon the constitution incident to lactation, may all be serious factors. Writers generally agree that the tuberculous process is made worse in a high percentage of both latent and active cases, the percentage of exacerbation being given at from 35 per cent to 75 per cent of cases.

**Effect of Tuberculosis upon the Child.** Infection of the child in utero may take place but it so rarely occurs as to be of negligible importance. The great danger of infection in the child is after birth. Children are much more susceptible to infection than adults. Practically all children of tuberculous mothers become infected, unless strict measures are used to prevent it. The mortality among these children is said to be from 50 per cent to 60 per cent, due largely to artificial feeding and to neglect on account of disability or death of the mother.

**Management.** The essential prerequisite for intelligent care in these cases is the adoption of the practice of having a complete, thorough, written history and physical examination in every case of pregnancy as early as our consultation in the case will permit, including a very careful examination of the bare chest by inspection, palpation, percussion, and auscultation. The assistance of the internist and of the X-ray should be sought for diagnosis in doubtful cases. The careful search for evidence of tuberculosis is of no less importance than the examination for the pelvic measurements, for kidney sufficiency, or for other infections. Cases of latent tuberculosis (second class according to arbitrary classification suggested) require no special management different from the careful supervision and hygiene recommended for all cases. The appearance of any symptoms suggesting activity of the tuberculous process is an indication for a re-examination of the chest. Cases with slight activity without fever or rales (third class) generally show a prompt continued improvement in health from longer hours of rest, fresh air, and proper feeding. In cases with more activity, having rales and fever, the advisability of a therapeutic abortion and sterilization should always be considered and consultation with the internist had as to the advisability of such a procedure. If the duty of mother to other children rests upon the patient; if the best treatment for tuberculosis cannot be carried out; if there will not be intelligent co-operation in safeguarding the child against infection after birth; if the patient would be burdened with the subsequent care of the child to the point of seriously endangering her chances for recovery; if prompt improvement does not

follow the institution of the proper treatment for tuberculosis—all these things argue for therapeutic abortion. The opposite conditions argue against the operation. Each case must be individualized and decided upon its own merits. Laryngeal tuberculosis and late pulmonary tuberculosis are indications for the termination of pregnancy. In all cases the operation is not indicated after the fifth month. In late tuberculosis the operation at any stage may only hasten the end. Bacon estimates that this procedure is indicated in one case in a thousand.

If the pregnancy is to continue in the presence of activity the patients should have the best there is of both medical and obstetrical care. Sanatorium treatment should be had if this is possible. The patient should be under close supervision during pregnancy, labor and the puerperium. During labor she should be saved as much shock from traumatism, from pain, and from the fear of pain, as much physical exertion, and as much blood as possible. Without discussing its merits and demerits in general obstetric practice, scopolamin-morphin analgesia, if given properly, meets the indications excellently in these cases. It is conservative of the patient's blood, allows her much rest during labor, and permits a gradual dilation of the soft parts with the minimum of trauma. It is remarkable how little shock patients have after its administration. These advantages much more than offset any imaginary or real jeopardy to the child from its judicious administration. Nitrous oxide is a valuable addition during the second stage.

The baby should be separated from the actively tuberculous mother. A wet nurse should be provided if possible. Under no circumstances must the child be permitted to nurse the mother.

I realize that many interesting phases of this subject have not been touched upon in this paper. I have tried to emphasize the part of the subject I consider most fertile for service to our patients.

The following literature has been consulted in the preparation of this paper:

- Text Books on Obstetrics, by De Lee, Cragin, Hirst, Williams, and Edgar.  
J. A. M. A., Sept. 6, 1913, p. 750; July 4, 1914, p. 46; Jan. 8, 1916, p. 84 and p. 77; Nov. 14, 1914; Aug. 5, 1915, p. 552.  
Am. J. Obst., Feb. 1915, p. 304 and p. 297; June 1916, p. 1005 and p. 997; March 1914, p. 521.  
Monographic Medicine, Vol. 11.  
Infection Immunity, and Specific Tyerapy—Kolmer.  
S. W. J. of Med. and Surg., Nov. 1915, p. 325.  
Records in 31 Consecutive Private Cases of Pregnancy with Complete Written History and Examination.

### MALIGNANT DISEASE OF THE THROAT.

The following are the conclusions of an article on malignant disease of the throat and sinuses and a review of cases treated by radium and Roentgen ray, by H. K. Pancoast, Philadelphia (*Journal A. M. A.*, Sept. 22, 1917): "1. In the treatment of inoperable malignant growths originating in cavities such as the mouth, throat and ear, radium therapy is an extremely valuable adjunct, for the reason that it can usually be applied directly to the growth, which is more or less inaccessible to direct Roentgen-ray exposure. This alone is not sufficient, and the growth should also be attacked from every possible direction by cross-firing either by radium or by Roentgen rays, or both. Any nearby area in which metastasis is likely to occur should also be exposed. 2. When implanted directly into sarcomatous tissue, radium usually causes little or no sloughing if the growth responds promptly. 3. It is advisable to produce as rapid subsidence of the growth as possible in order to minimize the possibility of metastasis during the period of treatment. 4. Our experience has seemed to prove that growths insufficiently treated at the periphery may be stimulated to more rapid proliferation at this portion. 5. Sarcomatous growths, especially in the tonsillar region, are more amenable to treatment than carcinomas. 6. It would be best to continue treatment for some time after the complete disappearance of the growth."



## THE TUBERCULOSIS SITUATION IN OKLAHOMA.

By JULES SCHEVITZ, General Secretary,  
Oklahoma Association for the Prevention of Tuberculosis,  
Oklahoma City, Okla.

"There should be no uncared for tuberculous patients in any civilized community. The untrained and uncared for tuberculous individual, whether he lives in a palace or in a tenement house, in a first-class hotel or a lodging house, will constitute a center of infection."—S. Adolphus Knopf, M. D.

Perhaps the most concise and at the same time the most inclusive definition of the purpose of the Oklahoma Association for the Prevention of Tuberculosis may be stated as the fulfillment of the desire expressed above. In other words, the ultimate object or goal towards which the Association is ever striving is "no uncared for tuberculosis in Oklahoma."

While to some this may limit the activities of the Association to cases of the disease already existing, with no provision made to institute measures for the prevention of the disease, upon second thought, however, one cannot fail to recognize that to care for tuberculosis means to prevent tuberculosis.

It is well to note that Dr. Knopf, in speaking of the danger of the uncared for tuberculous patient, for the moment disregards the handicap which such a patient confronts in his attempt to overcome the inroads of the disease, but stresses the fact that he is a center of infection for those with whom he comes in contact. We may say therefore, that the advantages to be gained by caring for the tuberculous lie not so much in enhancing the likelihood of his recovery, but rather in the fact that the possibilities of his disseminating the disease among the well members of the community are minimized.

The physician, therefore, when he instructs his tuberculous patient in the few simple precautions to be observed in the disposal of the tubercle-infected sputum, performs a service not only to the patient, not only to his family, but also to the community at large; a service of such import and consequence as is not equalled by giving corresponding directions in dealing with any other communicable disease.

The problem of securing supervision over all cases of tuberculosis resolves itself into two main component divisions. First, the discovery of all active cases, especially in the early stages when the chances of recovery are so much greater, and when proper hygienic and sanitary precautions are so apt to be disregarded; second, the actual treatment of the patient, including medical, nursing and institutional care. The first part of our problem lies within the province of the physician, the second we believe to be largely a matter of state, county, and local provision.

With so much of the machinery to satisfy the requirements of the first part of our problem already existing, the concentrated efforts of the Association will therefore be applied mainly to the solution of the other half; namely, to secure the provision of adequate nursing, dispensary and sanatorium facilities for the care of the tuberculous. We cannot emphasize too forcibly that the Association does not propose to supply this care unless all efforts to obtain it from the proper sources prove unavailing.

To say that these facilities are at present woefully inadequate is putting it mildly; to say that they are non-existent, is perhaps more nearly the truth.

One of the first obstacles encountered in an attempt to undertake a thorough analysis of the tuberculosis situation in this state is the lack of reliable statistics concerning the morbidity and mortality from this disease. A board of health directing the affairs of a community without complete and accurate vital statistics is like a person groping in the dark. The vital statistics is to the trained public health worker what the thermometer is to the physician, what the compass is to the mariner. It is the gauge and pulse of the health of the community.

That Oklahoma will soon have this most valuable data is earnestly to be

hoped, and the new Vital Statistics law is expected to do much to bring about this much desired condition.

The writer feels with the utmost confidence that this law will receive the whole-hearted support of the medical profession in this state, and that the time is not far off when quoting the statistics of Oklahoma will carry with it as much weight and as much significance as the publication of the records of the United States Registration Area.

Considering the tuberculosis problem in this state from its broadest angle, one can distinguish in it four or five well-defined subdivisions, and in the short space available, it will be possible to do little more than give the barest mention of these specific problems.

### **The Negro.**

According to the census of 1910 approximately eight and one-half per cent of the population of Oklahoma is made up of negroes. While this percentage is lower than that of the southern states, the influence of the negro upon the social and economic, as well as health conditions of this state, is not to be disregarded. The problem of the negro has become more acute since the beginning of the war and the condition of the labor market has caused an influx into this state of large numbers of negroes who are highly undesirable from the health standpoint. In many cases afflicted with communicable diseases, these negroes come here and constitute additional sources of infection to our people. In other instances the change of living from a purely open air existence to one where they are obliged to remain under more poorly housed and congested conditions, will predispose the negro to tuberculosis. In any case he constitutes an important source of tubercular infection and is especially dangerous on account of his increasing intimate contact with the white people of the state.

While there are no figures at hand to show the negro mortality from tuberculosis in Oklahoma, statistics tabulated by Dr. W. F. Brunner, health officer of Savannah, Ga., from the mortality records of that city, prove with remarkable clearness that the mortality rate of this disease is more than twice as great among the negroes as it is among the whites. For the year 1913, the tuberculosis rate among the whites was 123 per 100,000; while the negro rate was 321 per 100,000 population.

As Dr. Brunner so tersely summarizes the negro health problem: "The negro is here for all time. He depends upon the white man for everything that makes up a civilization. These two statements being true, he is what the white man makes him." And again, "it is up to the white people to prevent him from becoming a criminal and to guard him against tuberculosis, syphilis, etc. If he is tainted with disease, the white man will suffer; if he develops criminal tendencies, the white man will be affected."

Considering this problem from even the purely selfish standpoint, the health problem of the negro demands our most serious thought and consideration.

### **The Indian.**

The state of Oklahoma is the home in every sense of the word for about one-third of the Indians in this country. That civilization has made an attempt to bring these people within her fold, but has left them during their most critical period, is very well brought out by the testimony of workers among these people.

The commissioner of Indian affairs in his latest report states that "approximately three-fifths of the Indian infants die before the age of five years," also that "a large percent of the Indian mortality from tuberculosis is among children."

Estimates as to the extent of the ravages of tuberculosis among these people vary from ten to seventy-five per cent. No attempt has been made to conduct an intensive study of a limited area and all our figures are the results of observations of non-medical field workers. While it is true that these persons may have

mistaken other diseases for tuberculosis, one must admit that the probability of error on this side is far counter-balanced by the number of undiscovered incipient cases of this disease, which can be recognized only by the application of the most modern medical technique.

When we recall the dreadful living and housing conditions of these people, and also that these people demonstrate an unusually high susceptibility towards tubercular infection, it will not surprise us to discover that unless immediate steps are taken to arrest the progress of this wholesale infection, all the members of the family will be afflicted with the disease. Indeed as one field worker among the Choctaws very significantly states it, "unless steps are immediately taken to better their home and living conditions, the full blood Choctaw will be an extinct race in fifteen or twenty years."

The cause of this decay among the Indians is often attributed to civilization, but it is perhaps more correct to say that this unfortunate state of affairs has been the result of "not enough civilization." There seems to exist this curious phenomenon where a small dose of a substance produces toxic effects, and the antidote consists in prescribing larger doses of the original substance.

### **The Rural Tuberculosis Problem.**

In taking up the question of tuberculosis in the rural parts of this state, the writer hesitates to make any authoritative statements on account of the inaccurate reporting of deaths of tuberculosis and the imperfect reporting of the cases as required by law. The best we may hope to do is to make a rough estimate.

If one is to consider the statements of rural workers as being indicative of the actual extent of tuberculosis in this state, one is led to believe that its prevalence is widespread, to say the least. Dr. D. B. Tucker of the Extension Division of the A. and M. College, who is continually visiting and lecturing in the rural parts of the state, testifies to the apparent ubiquity of tuberculosis in the state. Dr. Tucker speaks of the disease as being accompanied by very poor housing and living conditions. The very essentials of right living and personal hygiene are entirely disregarded, and this added to the ignorance which these people have regarding tuberculosis, makes our task herculean.

A little investigation reveals the most absurd opinions which many people entertain about tuberculosis. There are three truths which must be brought to the attention of the people of this state and repeatedly so, and they are: first, that tuberculosis is not hereditary; second, that tuberculosis is curable, and third, and most important, that tuberculosis is preventable.

The fatalistic attitude which some people assume upon learning of their being afflicted with the disease, is one of the great obstacles we shall have to overcome if we hope to make any attempt to control the spread of this disease. Each focus of infection spits promiscuously, insuring the infection of other members of the family and thereby manufactures evidence in the support of his belief in the heredity of tuberculosis.

When it comes to the matter of fresh air, and keeping bed room windows open at night, the opposition which these people advance is most astounding. "Night air," they say, "brings sickness and death." This idea substantiates the statement of the physician who said "the reason you will find so much fresh air in the country, is because the farmers make sure to keep it out of their homes."

The large problem, therefore, and the one which will have to be met first, is the ignorance of these people. A very extensive educational propaganda which will reach the people through the events of their daily life, will have to be instituted.

### **The Urban Tuberculosis Problem.**

Even when one considers the prevalence of tuberculosis in our cities, it is difficult to offer any reliable statistics. The writer in an earnest discussion with an Indian worker regarding the presence of this disease among the Indians, was



decrying the lack of accurate data concerning its prevalence among these people, when a direct question produced a very profound effect upon him. "I admit," said the Indian worker, "that we are ignorant of its actual extent among the Indians, but tell me what authentic facts you can present about conditions elsewhere in the state." Very much surprised at the suddenness of this attack, the writer had to admit that we knew little more than what we know about the Indians.

This is the sad truth, but let us hope that we shall not be taunted this way very long, and that we shall be able to present definite facts and figures regarding the extent of this disease in all parts of the state. With this data at our disposal, we are in a position to offer a more rational and effective solution for the control of the disease.

In Oklahoma City there were 765 deaths from all causes in 1916, and of this number, fifty or about 6 1-2 per cent were due to tuberculosis. This ratio of the tuberculosis to the general death rate is much below the average, and the accuracy of the causes of death is therefore somewhat to be questioned. It is not unusual for cases of tuberculosis to be diagnosed as respiratory affections of less serious character, and even in case of fatal termination, the cause of death is veiled under some vague classification, instead of being labeled as tuberculosis. This has been proven to be a rather frequent occurrence in places where the assigned causes of death are checked up. It is probable that a similar condition exists in Oklahoma, but it is expected that an increased interest in the disease on the part of the physician will result in a more accurate reporting of deaths, thereby giving a more truthful picture of the actual prevalence of the disease.

In addition to the normal occurrence of tuberculosis, the larger towns have to bear the burden of the transient or migratory consumptive. This is well borne out by the complaints of the local relief organizations. The Provident Association of Oklahoma City, for instance, estimates that 65 per cent of its tuberculous cases are transients. The indigent consumptive grasps at the last ray of hope and often comes to the Southwest "chasing the cure." He expects that he will have no difficulty in obtaining work here, and will therefore have a chance to recover from the disease and at the same time be self-supporting. But unfortunately, this does not happen. Often these consumptives arrive in town too ill to work and so destitute that the first meal has to be obtained through the efforts of the local charities.

Instead of having plenty of good nourishment, fresh air and rest, which requirements are absolutely essential if one hopes to effect a cure, these persons remain half-starved, live in poorly ventilated and cooped-up houses, and worry, and waste away their lives. To say nothing of the expense which such individuals are to a community, they constitute very lucrative sources of supply of tubercle bacilli. These people would entertain many more chances of recovery if they remained at home near their families, where the opportunity of earning a living is so much greater and where the climate is probably just as salubrious.

In some cases these migratory consumptives are accompanied by their families, and where the bread-winner is unable to work, the wife assumes the financial responsibilities. Working under unaccustomed and even unhealthful conditions, and handicapped by a heavy mental strain, she frequently succumbs to the disease. Also the children who stay at home with the sick father and are fondled by him, almost invariably contract the disease. This latter point is very clearly demonstrated by the studies of Dr. H. G. Lampson, working in Minnesota. Dr. Lampson has shown that in families where no tuberculous individual is present, about eight per cent of the members show signs of tubercular infection; while in families where a positive case has been proven to exist, that 79 per cent react to tuberculin.

The great problem confronting the worker in the urban community is the ever present lack of institutional facilities. The matter of adequate tuberculosis

hospital and sanatorium facilities is of the utmost importance to this state, and the proposed program of the Association, which is expected to bring about this provision, is too lengthy to be described here and will have to be reserved for some future discussion.

### **The War Tuberculosis Problem.**

The newest problem which the Association will have to meet is the war tuberculosis problem. Everyone recognizes that the war will increase the amount of tuberculosis, not only among the soldiers, but also among the civilian population. We are all familiar with the disastrous ravages of tuberculosis in the armies of Europe.

Dr. Herman A. Biggs, Health Commissioner of New York State, who was sent to France several months ago by the Rockefeller Foundation to make an inquiry into the tuberculosis situation of France, has returned with a report which indicates that the great increase in the prevalence of tuberculosis in France has become a menace to the future life and economic development of the nation.

Dr. Biggs found that up to February, 1917, approximately 150,000 soldiers had been discharged from the French army because of tuberculosis, and that there were undoubtedly more than 400,000 cases among the civil population. Later advices, received by Dr. Biggs from France, place the probable number of cases among the military and civil population of France as close to 800,000.

Inadequate hospital and sanatorium facilities have added materially to the mortality among the tuberculous soldiers and contributed to the spread of tuberculosis in Europe. France, in her struggle to meet the tuberculosis problem, hopes to have 15,000 sanatorium beds available at the end of 1917—15,000 beds for her 450,000 tuberculous people. As a result of this unpreparedness in sanatorium facilities, 100,000 of the 150,000 actively tuberculous French soldiers have been compelled to return to their homes to spread the disease among their families.

In this country we are trying to profit by the experience of the other warring nations by giving each recruit a careful physical examination before being accepted in the army. In New York the X-ray has been successfully employed in detecting the presence of tuberculosis among the soldiers.

The examination of the first million men in the draft has caused the rejection of more than 25,000 men on account of tuberculosis. In most cases the individuals were infected with the disease unknown to themselves. The Association hopes to take advantage of this discovery and will follow up every reject in Oklahoma with the idea of helping him arrest the progress of the disease. We have received permission from the Provost Marshal General's office to obtain the records of every such reject.

Considering the fact that only a small percentage of the medical examiners might be termed skilful in the diagnosis of early tuberculosis, it will not surprise us if upon closer examination a larger percentage of the drafted men will be rejected. Aside from the many who will succumb to the disease as a result of intimate contact with the infected soldiers of our Allies, it is known that the rigors and hardships of war will cause the breakdown of a great many others.

As the basis for a program to meet the special war problem, we quote the summary of an outline prepared by Dr. George Thomas Palmer of Springfield, Ill. Dr. Palmer is a member of the sub-committee on tuberculosis of the General Medical Advisory Board of the Council of National Defense.

There are six main divisions in this program.

I. Increasing the appreciation on the part of the military authorities and the public as to the importance of tuberculosis as a wartime problem.

II. The development of anti-tuberculosis machinery in every county in the state. This includes the increasing of all nursing and dispensary facilities as well as the co-operation of the State Medical Society, the State Department of Health and the State Tuberculosis Association.



- III. Improvement in the methods of examining recruits.
- IV. Establishment of tuberculosis hospitals and sanatoria.
- V. Control of tuberculosis in the civil population.
- VI. Creation of medical forces to meet the special war problem.

It is known that a close observation of the suggestions offered by Dr. Palmer will succeed in minimizing the amount of tuberculosis which may be brought on by the war.

### INTRASPINAL INJECTIONS IN NERVOUS SYPHILIS.

Bernard Sachs, New York (*Journal A. M. A.*, Sept. 1, 1917), remarks on the impression that the use of salvarsanized serum in the spinal canal has, since its introduction, exercised on the medical profession. He was at first one of the ardent advocates of this newer method, but his clinical experience has since taught him that the intravenous injection of salvarsan or neosalvarsan produced effects that were entirely satisfactory and at least comparable with those obtained by intraspinal injection, and, other things being equal, much the safer. Three years ago, in a research with Drs. Strauss and Kaliski, and with the assistance of as able a chemist as Professor Benedict, he found that salvarsan introduced in the usual quantities into the blood current was afterwards found in appreciable quantity in the cerebrospinal fluid, thus indicating that the choroid plexus is not impermeable. The facts that have come to our knowledge are first of all, as Weed has pointed out, that since pressure in the cerebral capillaries is considerably higher than the cerebrospinal tension, it is far more likely that the fluid leaves the cerebral capillaries, and circulates in the pericapillary and perineuronal spaces, and that a metallic substance like salvarsan introduced into the spinal canal does not remain in the cerebrospinal fluid for any length of time, but is rapidly absorbed into the venous system. It has been shown, also, that the cerebrospinal fluid circulates very imperfectly and that the natural course it follows is not favorable to the absorption of substances carried by the cells of the cortex. It is further known that salvarsan and its homologues are of little or no use in tabes or paresis when given by the ordinary channels, as they are not retained, but passed into the venous system. Some of the ardent advocates of the intraspinal method are beginning to acknowledge that the intraspinal treatment alone cannot reach the virus of poliomyelitis and what is true of poliomyelitis virus is also most likely true of syphilitic virus. He thinks that laboratory workers have had a little too much to say in regard to this clinical problem, and also that in many particulars the advantages of the intraspinal method have been grossly exaggerated, and the claims of the remarkable reduction in the lymphocyte count and the Wassermann reaction, etc., have had too much influence. These changes can be brought about in a number of different ways, and there is absolutely no correspondence between them and the condition of the patient. He doubts whether any patient has been definitely cured by the treatment. Sachs gives his general impressions based on experience and finds that few or no cases of real paresis have been accurately diagnosed as thus cured, and as for tabes dorsalis, while he thinks there may be no doubt patients are satisfied with the results in many cases, it is really the meningomelic forms of a tabetic type that are the ones benefited most readily. In general paresis, salvarsan treatment has not helped him to bring about a cure, but in some instances it has seemed to retard the progress of the disease and caused marked remission. The problem for the future is to find some more diffusible remedy, lipid soluble and less toxic than salvarsan that would be able to pass through the blood stream into the tissues of the brain through the choroid plexus into the spinal canal and attack the foci of spirochetes wherever they may happen to be located. We need not despair of the future, and if the neurologist and laboratory worker will rationally and impartially cooperate, we may reach an era of satisfactory antisypilitic therapy.



## EARLY RECOGNITION OF PULMONARY TUBERCULOSIS AND ITS ECONOMIC VALUE.

W. FOREST DUTTON, A. M., M. D.

Consulting Physician to Tulsa Hospital, Tulsa, Oklahoma.

Tuberculosis as a disease was known to Greek physicians. Hippocrates described the clinical features of pulmonary tuberculosis. Galen apparently recognized the contagious nature of the disease. In the seventeenth century, Sylvius demonstrated the association of the tuberculous nodule with consumption. Morton, a contemporary of Sydenham, wrote (1689) a classic description of the clinical features of the disease.

The recognition of the tubercle as the anatomic basis of consumption by Baillie was the foundation of our knowledge of the gross anatomic structure. The nineteenth century marked two important advances in our real knowledge of the disease.

The work of Bayle on the anatomic structure of the miliary tubercle, and its importance in causing constitutional disturbance, was a notable factor. The establishment by Laennec (1819) of the unity of all tuberculosis lesions laid the foundation of our modern knowledge of tuberculosis. He also paved the way for modern clinical medicine.

An epoch making period in the history of medicine was begun on December 5, 1865, when Villemin read a paper showing that he had upset all previous theories as to the nature of tuberculosis. He had shown, by many well conducted experiments, that tuberculosis is a virulent, infectious, inoculable disease. The brilliant work of Villemin had placed the infective nature of tuberculosis on a firm experimental basis.

Koch, in 1882, discovered the bacillus tuberculosis. He gave to the world one of its greatest discoveries, which will be second only to the discovery of a specific cure for tuberculosis.

From a zoological point of view, tuberculosis is widely spread. Cold blooded animals are rarely affected. Monkeys, cattle, and pigs are subject to tuberculosis. It is rare in horses, sheep, and goats. The carnivorous animals, such as dogs and cats, are not prone to the disease. Tuberculosis in fowls (Avian tuberculosis) differs from the mammalian forms. The wide distribution of animals readily facilitates the dissemination of disease in man.

Tuberculosis infects every land upon which mortal man places his foot. This Pirate Captain of death respects neither race nor color, rich or poor, old or young. In the United States alone he collects a total of 70,000 deaths, and causes an economic loss of 200 millions of dollars annually.

It is true that modern sanitation has materially reduced the mortality in the last decade and without doubt will be one of the most potent factors in the final elimination of the disease. Early diagnosis, education, sanitation, and segregation mean much relative to the early and permanent cure of tuberculosis. A rich soil without seed bears no harvest. Thus a much debilitated body without the tubercle bacillus is not going to develop tuberculosis.

There has been much discussion from time immemorial about keeping the resisting powers of the human body at par. This argument is without a firm foundation. The human body is not a perfect organism nor will it ever be. It is mere fallacy, therefore, to endeavor to perform an impossible feat in legerdemain.

There is connected with some of our learned institutions men whose sole occupation is the advocacy of theories concerning the cure of the many ills of mankind. Having entree to the so-called best medical circles, they unload their pet theories on their unsuspecting conferees in such a forcible manner that they must be incorporated in text-books or they plagiarize the life work of the quiet, modest, almost unknown observer who works patiently remote from the great medical

centers. This is the hydra-headed monster that underlies our medical fabric and is doing more harm and has done more to prevent the cure of disease than any other factor.

An investigator had been using autoserotherapy with various modifications for two years in the treatment of tuberculosis. He had had marked success in some 52 cases. This same observer presented a paper before the section of Pharmacology and Therapeutics of the American Medical Association in June, 1917, in which he briefly stated his results. The paper was fully discussed by the section. If it did not have merit, why was it discussed? Why has that paper, either in abstract or in full, not been published? Three months later a physician read before a large medical assembly in Chicago the exact substance of the paper read by the observer and called it his own.

This is not an unusual incident. Some of the best and most progressive work done in this country is from men unheralded and practically unknown. The institutional worker loses 50 to 70 per cent of his cases and is renowned by his voluminous texts and heralded to the four quarters of the globe. The practitioner whose mortality runs below 2 per cent remains unknown.

The reader may question the writer's motive in making the above statements, but he can assure him that it is made with an altruistic motive in view of the present status of the medical literature. The sooner the medical profession strikes the shackles of tyranny and tradition from its so-called leaders and begins to think and observe for itself, the better for suffering humanity.

The early diagnosis of pulmonary tuberculosis is a difficult problem for the majority of the medical profession. Why? In the first place, they follow the rule of thumb. In other words, they fall back on the traditional stereotyped description of tuberculosis that has been the rule and guide of the barbers, soothsayers, and physicians since the time of Hippocrates. It is true that many a good farmer or clerk was lost to the world when some men were given their license to practice medicine. Do you get the point? There are no set rules or line of symptoms to be selected in the early diagnosis of pulmonary tuberculosis, and the sooner the physician learns this the better.

The first requisite for a diagnostician is brains—medical brains—that live, think, act, and practice medicine; the second, good eyesight and acute hearing; the third, good sense of touch, taste, and smell; the fourth, a synthetic sense of systematizing and applying such knowledge.

A brief discussion of the early lesion will aid greatly in the understanding of the means of the early diagnosis of incipient pulmonary tuberculosis. It should be ever kept in mind that incipient pulmonary tuberculosis is strictly a localized condition. In part as an illustration, and in view of an easier understanding of the beginning tubercular focus, I shall call your attention to an abrasion upon the hand. This abrasion is infected with streptococci for a certain period of time, there is no systemic involvement. The resisting forces of the body have thrown up barriers, making the lesion a local one.

The formation of all permanent fortification of anti-streptococci seroplastic tissue, which soon becomes fibrous, renders the infection harmless. Should the resisting powers, or antibody formation, be such that they are overcome, there is excessive formation of toxin, vaso-dilatation, lymphatic involvement, systemic involvement, and cellular degeneration. Practically, from an illustrative point of view, the same thing takes place in tubercular infection of the lung.

This is why I maintain that it is practically impossible to diagnose incipient pulmonary tuberculosis by any other method than the auscultatory. In a paper, read before the Tulsa Academy of Medicine, March 31, 1916, and published in the September (1916) Journal of the Oklahoma State Medical Association, I divided, for the sake of convenience, the stages of pulmonary tuberculosis into three periods each. These classifications, as in other diseases, are fairly typical. Tuberculosis

is a many sided disease, and does not admit of a perfect method of diagnosis because of the many complications.

### Physio-pathological Classification.

	1st Stage	2nd Stage	3rd Stage
<b>First Period</b>	Rough breathing, cogwheel inspiration, squeaking, rasping choo-choo, or a jerky rasping sound on inspiration.	Abundant expectoration, appetite erratic. Wasting begins, dullness on percussion, dry crackling rales.	Gurgling if cavity formation. Cracked-pot sound, cavernous breathing, pectoriloquy.
<b>Second Period</b>	Prolonged jerky expiration, dry subcrepitant rales (often absent), slight fever.	Extensive dullness, moist rales. Breathing rough and blowing.	Amphoric breath and voice sounds metallic tinkling. Hectic fever, profuse sweats, extreme wasting and cachectic oedema.
<b>Third Period</b>	Slight cough, fever, sometimes hemoptysis, some dullness on percussion.	Bronchophony. Pleural friction sounds in various regions, often in the apex. Laryngitis, tracheobronchitis, chills and fever, sweats.	Exaggeration of second period, toxic exhaustion, and death.

It is not for me in this short paper to endeavor to dwell at length on some symptoms such as expectoration, fever and hemoptysis, for they are not, as a rule, incident to incipient pulmonary tuberculosis. I shall discuss tuberculosis in children and elderly people only to say that children may become tuberculous at all ages, and elderly people are more frequently affected than is usually supposed.

The very young child, from a few days to two years old, presents a familiar type of tuberculosis. It may appear as a broncho-pneumonia, and show all the lesions of tuberculosis seen in adults. The new born may have tuberculosis either by mediate contagion, or by heredity.

### Pathological Classification.

	1st Stage	2nd Stage	3rd Stage
<b>First Period</b>	Lesion, localized without involvement of adjacent tissue. No systemic infection though affecting the vegetative nervous system. Increased pulse rate.	Caseation, extrusion of portions leaving small cavities, cough may be present or absent. In rare cases calcification may accompany encapsulative ulcers, interstitial pneumonia.	Involvement of other organs. Pericardium, peritoneum, brain, spleen, liver, kidney, intestines, heart.
<b>Second Period</b>	Beginning involvement of surrounding tissue lymph channels. Formation of toxins, slight fever, cough may be present or absent, rapid pulse.	Exaggerated condition of first period, the enlargement of cavities, hemorrhage, bronchial dilatations, and extrusion of large amounts of debris, intense intoxication, cough.	Suppuration, hemorrhage gangrene, empyema, pneumothorax.
<b>Third Period</b>	Breaking down of cell substance, granulation, infiltration of endothelial capillaries, and finally invasion of capillaries. Beginning systemic intoxication and marked rise in temperature, cough as a rule.	General toxemia, mixed infection, pleuritic adhesions.	General toxic devitalization, collapse, and death.

In common chronic tuberculosis, the lesions found in the lungs—especially at apices—may vary according to age and form. They are tubercular infiltrations, granulations, ulcers, cavities, bronchial dilatations, interstitial pneumonia, pleural adhesions, empyema. The two chief forms which may be isolated or combined are the granulation and the infiltration. The mixed infections, more especially when syphilis and actinomycosis are involved, present difficulty in diagnosis.



Tuberculosis in elderly people is more torpid, and its symptoms less marked, than in the middle aged or the young adult. I shall repeat the language that I have used often in the discussion of tuberculosis: *There is no disease in the realm of medicine in which an early diagnosis is of more importance than in that of pulmonary tuberculosis, unless it is carcinoma.*

I admit that it is difficult to secure the opportunity to examine patients who to all appearance are perfectly well, yet through proper supervision of the health of the population the mortality from tuberculosis could be reduced to a minimum. For example, during the last year I have examined, for the Draft Board and from referred patients, some 800 persons. These persons, as a rule, were examined for general conditions, yet startling as it may seem, some 200 had incipient tuberculosis. The point I wish to bring out is the fact that these persons were unaware of the condition until examined. This timely examination and warning gives them ample opportunity to retrench and protect their health.

There is no doubt that in a number of cases predisposition furnishes a fertile soil for tuberculosis. The phthisical type is familiar to the profession and is described as disposition, dyscrasia, diathesis, constitution, or temperament. These terms may be interpreted so that they are intelligible to the laymen.

Disposition means that peculiarity of the organism which enables the exciting causes of the disease to be effective. There may be an inherited or acquired disposition. The implantation of the phthisical soil is known as heredity and plays an important part in the individual's hazard. There is no doubt at all that tuberculosis is inherited.

The urban populations are particularly prone to tuberculosis because of the vast number of predisposing causes.

The phthisical type was described by Hippocrates as a smooth, whitish individual with blue eyes, leucophlegmatic, and scapulae having the appearance of wings. The scrofulous type had broad coarse features, opaque skin, large thick bones, and a heavy figure.

The lowered resisting body forces furnish a soil readily susceptible to the invading tubercular bacilli. This condition is known as acquired disposition, and is found mostly in city dwellers, more especially those living in dark alleys, tenement houses, workers in damp ill-ventilated rooms, in persons addicted to drink or drugs. The studies of Naegli, Burkhardt, and others point out that 90 per cent of city dwellers have had tuberculosis at some time in their life. Hamburger has shown that 90 per cent of children are infected before reaching twelve years of age. These figures vary depending upon urban or rural population.

No age or race is exempt, but the Jews everywhere have a low mortality from tuberculosis. The Negro, the North American Indian, and the Irish are more prone to the disease.

Occupation, local conditions, diseases of the respiratory passage, specific fevers, chronic affections, and trauma predispose to tuberculosis. There is no question as to the influence of climatic conditions upon pulmonary tuberculosis. There are many localities in Oklahoma in which tuberculosis may be treated with much satisfaction. The climate is more equable than any state with the exception of New Mexico, Arizona, and Wyoming. The selection of a climatic redaption depends a great deal upon the type and the period of tuberculosis. Some patients may do well in Wyoming while others fare better in Arizona or New Mexico.

A few years ago physicians of the eastern United States pointed with pride to the states west of the Mississippi, and said to their tubercular patients: "Go west, young man, and grow up with the country." They were reasonably sure that in this pioneer country, with its virgin soil, there was hope, health and happiness.

In the last decade, this has materially changed. Today, our cases of tuberculosis are not coming from the east, but from Nebraska, Kansas, Missouri, Arkansas, Texas and Oklahoma. The reader may ask a reason for this rapid change.

Our eastern conferers have taken advantage of available sanitary measures. They have enacted laws, provided city, county, and state sanatoria for the tubercular. Our mid-west states have been grossly negligent and as a matter of fact our tubercular population is increasing at an alarming rate.

We are boastful of our natural resources, our developed wealth. We appropriate hundreds of thousands of dollars for the conservation of our resources, for the health of our cattle and hogs, but hardly a dollar for the conservation of human life. The strength of a nation is based intrinsically upon the health of its people, and unless that health is conserved it is doomed to perish from the earth. We boast of our strength as a warring nation, yet we are allowing syphilis, cancer, and tuberculosis to tear holes in our lines of defense far greater than will ever be torn upon foreign fields of battle.

I believe there is no permanent greatness to a nation except it be based upon health—mentally, morally and physically. I do not care for military renown. I care for the health of the people among whom I live. There is no man in Oklahoma who is less likely to speak irreverently of the legislative enactments of the state than I, but political honors, meaningless laws, and huge appropriations are, in my opinion, all bauble and vain unless with them we can have a fair share of health, comfort and happiness among the great body of our population. Vast estates, great wealth and stately mansions do not make a commonwealth. The commonwealth of every state dwells in the home, and unless health, contentment and happiness are there, and so maintained by our laws, we have yet to learn the duties to our state and country.

The most ancient of profane and sacred historians have told us of the decay and death of nations, due to the ravage of disease. It appears that the worship at the shrine of Venus and Bacchus is as intense as at any time in history. One billion and a half dollars are spent for tobacco alone. The question often arises, is our civilization progressing beyond that of ancient peoples? What are our contributions to charity, to education, to morality, and to health work when compared to the wealth we expend at the shrine of vanity, appetite, and passion?

The great mass of the people of the state of Oklahoma have only limited means of informing themselves on the subject of tuberculosis. Through the medium of the Journal, I am privileged to communicate with a scientific body of men. You represent those of your great commonwealth who have a more complete education along medical lines, and in you is vested a power and influence in your district. You know the needs of your community and state; you can mold public opinion and create political power; you can not think seriously upon the subject of tuberculosis and tell it to your neighbors, you cannot make it a topic of discussion in social or medical circles, without materially affecting the course of legislation.

I ask you to believe, as I do most devoutly believe, that the laws of health are the basic principles upon which to build a state or nation. If a community, state, or nation rejects and derides the laws of health, there is a penalty which will inevitably follow. It may not come at once, but the laws of compensation are as immutable as the seasons of the year. Great empires have risen to zenith of power to be destroyed by plagues. We know what the past has cost us, we know how far we have, and are transgressing the laws of health, but we are not without a means of health. It is true, we do not have the wisdom of a Moses to guide us, but we have the wealth and wisdom of a great commonwealth to guide us, and let it be said that the Sovereign State of Oklahoma is doing all in her power to free her men, women and children from that most dreadful of all diseases—tuberculosis.

In conclusion, I shall suggest the factors I deem imperative in the prevention, control and cure of tuberculosis:

1. **Examination** of each individual of the state once yearly, and report of such examination made a part of record of the commissioner of health.

2. Medical inspection of schools—public and private.
3. The enactment and enforcement of state laws relative to sanitary control of public eating and drinking places.
4. Enforcement of the anti-spitting laws.
5. Enforcement of laws relative to the reporting of tuberculosis, and medical inspection, once yearly, of all public and private institutions wherein individuals are housed and maintained.
6. Provision made for a clinic on tubercular conditions at each meeting of the State Medical Association.
7. Provision made by each county society for, at least twice a year, a symposium on tuberculosis.
8. An institution erected and maintained by the state for the care and treatment of tubercular patients.
9. Educational propaganda distributed by health department and such propaganda made a part of the school texts.

## THE CLINICIAN AND THE LABORATORY.

GEO. A. LAMOTTE, M. D., Oklahoma City

On the theory that it is desirable for the general practitioner to follow a routine working outline, I beg your indulgence while endeavoring to analyze the natural procedure of the clinician, his attitude towards, and expectations from, laboratory findings. Not so much with a view of putting the laboratory on the scales and weighing it in for what it is worth as a result getter, more than to promote an understanding mutually advantageous to the patient, physician, and laboratory worker.

### The Clinician.

The laws of our land demand of every physician that he exercise ordinary skill and intelligence, exhibit customary prudence and wisdom, and to pursue his plan with due diligence. The greatest requisite for any physician is an established reputation for probity. Culture and education may clear his conceptions gained from experience, but it is imperative he be well grounded in, and conversant with, the facts of pathology, semiology, and the natural history of disease. Scientific men love to seek after truth, and since "truth is the definite relation that things, facts, phenomena and conditions sustain toward each other," it becomes all the more desirable that the physician be capable of painstaking and accurate observation.

The worth while clinician exercises prudence and wisdom by a cold judicial analysis of available facts, and curbs an over projectile imagination, at least by the limits of consistency. In contrast to the impulsive, up to the minute faddist, he approaches the bedside with an open mind, instead of a pet theory, and endeavors to ascertain:

1. The intensity of the pathology and condition of the individual.
2. Relative importance of prominent symptoms.
3. Existence of complications, or intercurrent disease.
4. Is the cause still operative, or is the syndrome the result of a cause that has ceased to act?
5. Collates facts elicited with the general knowledge of the profession.

His diagnosis and treatment are ultimately checked by all laboratory findings, and the opinion of his specialist colleagues when occasion requires.

### Correct Attitude.

Merely apply the golden rule for your patients' welfare. Whenever a direct diagnosis is possible or the patient is moribound, to request or allow burdensome



or painful tests done as a routine is not fair. The patient should always be treated as one's friend and to see them exploited as a commodity is highly reprehensible. Much agony of spirit may frequently be spared them by exercising common honesty and truthfulness in explaining the accepted significance and limitation of many tests, e. g., a Wassermann, or tuberculin, test had best previously be qualified, as merely symptoms, and not a pathognomic sign to avoid doing more harm than good—both for the welfare of the patient and the reputation of the physician.

Broadly speaking, the practitioner should justly claim the expert opinion of his colleagues worthy of being termed specialist as a strong branch of his laboratory facilities, since laboratories endeavor to furnish specific information or preparations with particular emphasis placed on skill and careful attention to minute detail in the use of methods or instruments of precision.

Most experienced practitioners uniformly recognize that it is only the medical sciences that deal primarily with disease as entities, while the art of diagnosis and therapy must deal with individuals as modified by diseased processes. Therefore he does not hope to standardize his every day practice into groups of definite entities any more than he can hope to treat his clients successfully with a pocket formulary or be efficient in using stereotyped classical operations regardless of extenuating circumstances.

It is by virtue of the almost universal recognition of this state of affairs we have the distinction of being regular physicians and it is easy to see the fallacy of any school that heralds all disease is due to a common cause or that *similia similibus curantur* is always tenable. This conception entitles regulars to the just distinction of practicing an orthodox medicine.

### The Laboratory.

The most rational and orthodox efforts of human ingenuity has endeavored to pattern their plans after nature's way of combating disease. Natural resistance appears to destroy infectious agents, neutralize their toxins, or at least limit their activity.

This conception once granted, our hope for and loyalty to efficient laboratories should be unshaken. They at present constitute our best and only method of eliciting essential symptoms in advance of other definite clinical manifestations. Our position becomes a matter of when in doubt it is highly advantageous to seek information from sources most likely to render service. Furthermore, doctors believe looking the door before the horse is stolen is a safer policy than watchful waiting, e. g., prompt administration of antitoxin in suspected diphtheria, even before available cultures for decision as to required quarantine regulations or necessity of immunizing exposed children. We believe this is playing safe rather than jumping at conclusions.

I argue the main question the clinician has involved is where can he best avail his clientele of efficient dependable laboratory work. The following considerations may help in selecting those laboratories he ordinarily may place confidence in.

First: Those in charge of laboratories should possess all the virtues claimed for the ideal clinician as to general information and in addition must have had sufficient special technical training to insure painstaking accuracy in the carrying out of minute detail.

Second: Laboratories should be well equipped and ably manned, even to those who do the routine tests.

Third: Suitable opportunities for obtaining specimens and additional history from the patient is desirable.

With these requirements it is evident the amount of work any one man can do is decidedly limited, for this reason efficient laboratories can hardly be expected to thrive outside of hospitals with a large patronage where concentration and suitable facilities for follow-up tests coexist.

The wise clinician knows full well it is only when reliable information is properly interpreted that the patient profits, consequently there is no occasion to get excited over those laboratory men who do this work merely as a present help in the time of need, save for one's philanthropic interest in educating the worthy. It's about as easy to pose as a laboratory expert as it is to claim you are a specialist and carry your card in the Journal. Laboratories theoretically are good things, but so is morphine a good drug—either may be compared to a two edged sword, capable of doing harm as well as good.

This question of compulsory routine laboratory work at a minimum fee as carried out in most hospitals, is a laudable plan, and meets many reasonable demands of the times. I have often wondered if some of these reports are of any more value than a check without the donor's signature. Human nature and inexperience in this province is about on a par with a nurse assuming to give professional advice—always a nuisance and can be a menace to the patient's welfare. This is calculated to cause one to feel about in the same state of mind as being called into consultation more to O. K. a series of errors than to express an unbiased opinion.

These patent inconsistencies were introduced to endeavor to impress the necessity of the profession facing about and under intelligent co-operation creating sufficient incentive for a greater number of competent physicians to make laboratory work a life specialty. Scientific medicine stands today a greater debtor to a few efficient laboratory workers than any other branch of our calling. The rights of our clients demand efficiency. The laboratory of its own right demands a hearing. It is imperative that reason should prevail.

#### **Expectation of Laboratory Workers.**

"Only a natural immunity keeps the race alive." The hope of the medical profession sees a guiding star in her laboratories already beginning to appear on the darkened horizon of Empiricism and dogmas. Our ultimate destiny is at present largely being moulded by a select few brilliant, ambitious and tireless research workers. Each new discovered truth lends its quota to the sum total of our ability to render service to humanity. Hypersensitiveness, anaphylaxis, agglutinins, complement, amboceptor, antigen and immunity carry only vague meaning to most of us. We hope and trust their intrinsic significance may be further interpreted and eventually harnessed just as electricity is in the mechanical world. These evolution processes work insidiously but surely. It is imperative for every intelligent physician to secure for his clientage the best possible laboratory facilities available, both from an intelligent sense of duty and in the direct interest of suffering humanity.

---

#### **PREGNANCY AND TABES.**

Pregnancy rarely occurs in tabes, partly because of the predominance of men thus suffering and partly for other reasons, as E. M. Allen, Los Angeles (*Journal A. M. A.*, Sept. 22, 1917), says. He has found very scanty literature to refer to in the case he reports. The patient was a woman, aged 27, who had had two miscarriages since her first child; each of these was spontaneous and painless. She first began to be troubled with shooting pains of tabes about January, 1917, and they have continued to date. The labor in this case was indolent, but was expedited by the use of pituitary solution. It continued seventy-two hours or more. Both mother and child had a feverless, uneventful puerperium. There was no pain in the labor until the head was on the perineum, and then less than usual.

# JOURNAL OF THE OKLAHOMA STATE MEDICAL ASSOCIATION

VOLUME X

MUSKOGEE, OKLA., DECEMBER, 1917

NUMBER 12

PUBLISHED MONTHLY AT MUSKOGEE, OKLA., UNDER DIRECTION OF THE COUNCIL

DR. CLAUDE A. THOMPSON, EDITOR-IN-CHIEF

ENTERED AT THE POST OFFICE AT MUSKOGEE, OKLAHOMA, AS SECOND CLASS MAIL MATTER, JULY 28, 1912

THIS IS THE OFFICIAL JOURNAL OF THE OKLAHOMA STATE MEDICAL ASSOCIATION. ALL COMMUNICATIONS SHOULD BE ADDRESSED TO THE JOURNAL OF THE OKLAHOMA STATE MEDICAL ASSOCIATION, 307-B SURETY BUILDING, MUSKOGEE, OKLAHOMA.

The editorial department is not responsible for the opinions expressed in the original articles of contributors.

Reprints of original articles will be supplied at actual cost, provided request for them is attached to manuscript or made in sufficient time before publication.

Articles sent this Journal for publication and all those read at the annual meetings of the State Association are the sole property of this Journal. The Journal relies on each individual contributor's strict adherence to this well-known rule of medical journalism. In the event an article sent this Journal for publication is published before appearance in the Journal, the manuscript will be returned to the writer.

Failure to receive the Journal should call for immediate notification of the editor, 307-B Surety Building, Muskogee, Okla.

Local news of possible interest to the medical profession, notes on removals, changes in address, deaths and weddings will be gratefully received.

Advertising of articles, drugs or compounds not approved by the Council on Pharmacy of the A. M. A. will not be accepted.

Advertising rates will be supplied on application. It is suggested that wherever possible members of the State Association should patronize our advertisers in preference to others as a matter of fair reciprocity.

## EDITORIAL

### OKLAHOMA'S NEEDS IN TUBERCULOSIS PREVENTION.

By DR. JOHN W. DUKE, State Commissioner of Health.

One of the first and most vital necessities for the prevention of tuberculosis in Oklahoma is to know exactly the extent to which it is prevalent. In the past this has not been possible. Under the old system of vital statistics only part of the deaths in this state were reported. There also has existed in the past—and unfortunately persists to a certain degree at present—a prejudice in the minds of some physicians against reporting morbidity cases of tuberculosis. A better understanding of the reason for regulations of the State Board of Health regarding the reporting of tuberculosis, an increasing sense of personal responsibility, is removing this prejudice. The new Vital Statistics law which went into effect on July 1st will afford more full and accurate statistics regarding the mortality rate from tuberculosis. The new system has many details, it takes time to get it into complete working order. I think the system will be in practical operation by January 1st. It is the same in every detail as the model law approved by the Federal Government. We will then have the necessary information as to the prevalence of tuberculosis. This is the first step.

Oklahoma needs more tubercular sanatoria, both private and publicly maintained. In this important respect this state has lagged behind some others, a condition in part due to the fact that tuberculosis, while much too frequent, is nevertheless much less prevalent than in states with a colder and damper climate. Public opinion is being aroused as to the necessity for such sanatoria.

But the great and vital necessity for the prevention of tuberculosis in Oklahoma is more thorough and extended education of the general public in regard to its evils and how to avert them. Legislation is needed along certain lines, but to a large extent such legislation is dependent upon public education and the attitude of the people. For in the long run the people of Oklahoma will get the legislation they desire.

There are reassuring signs that great progress has been made in the education



of the general public along this line. But any result which has been achieved falls far short of what we desire. There is no disease of which the axiom "prevention is better than cure" is more true than tuberculosis. In this instruction and education of the public the individual work of members of the medical profession is the most important factor. The State Board of Health is making constant and increasing efforts in this direction. Gradually the people are getting rid of old superstitions and beliefs regarding tuberculosis, coming to understand that it is not hereditary, that pure air, good food and hygienic conditions are the only real cure for tuberculosis, as well as the practical means for preventing its development. They are coming to understand when there is danger from infection and when there is none. But it is a great and laborious task to bring these truths home to the growing and to a certain extent shifting population of so large a state. It is a work in which the co-operation of the State Board of Health and the medical profession is especially essential. We are all working towards a common end—the conservation of the health of the people of Oklahoma. There can be no higher aim.

Never in the history of this country was it so important as in the present national emergency that practical and far-reaching action be taken to avert the menace of tuberculosis. Hundreds of thousands, perhaps ultimately millions, of the pick of American manhood will be called upon to defend liberty and humanity in the greatest contest the world has ever seen. The government is taking many precautions to guard the health of America's soldiers, but some of the conditions of modern war, especially life in the trenches, are such as to promote tuberculosis. We have before our eyes the warning of conditions in France, among the Belgians and to a lesser condition in Canada, of the terrible evils which will result from failing to take precautions in time. May we heed the lesson before it is driven home to us by the deaths and ruined lives of America's best.

---

### UNIVERSAL MILITARY TRAINING.

It is said "I told you so" is an unnecessary piling up of the obvious, but the present plight of the United States as to military unpreparedness, the vastly worse and unfortunate plight of the little warring nations of Europe who were comparatively unprepared with the great militaristic neighbors, should warrant one in using the term. Yea, even more might be said with bitterness, but that is not necessary beyond the inquiry as to the present plight of the pacifist of Serbia, Belgium, Roumania and Russia and the further inquiry of the status of our men in the training camp as to fitness for the front when it is taken into consideration that the raising of these men for military service in the hour of dire need, technically speaking, began six months ago.

The Clinical Congress of Surgeons meeting in Chicago listened to some of the world's greatest Anglo-Saxon-Americans, after which they promptly adopted the principle of Universal Training, not alone for its crying necessity to the Nation, but for its great effect in improving the manhood and physical well being of our boys. Those who have studied the subject know that a good man is made better, a poor man improved often beyond measure by a few months of the steady sensible training given and leaves the service much better able to cope with the problems of daily life than before. Whether we like to fight or not, there is and has been fighting all around us and we have been finally drawn into it in the interests of Democracy as against Militaristic Autocracy and this is no time to split hairs and womanishly theorize with our pet ideas as to the best thing to do about it. There is only one thing to do and that is fight and with all a great Nation's might. It is true that might has not been systemitized as it should have been, but Universal Training is the greatest step to render the full force of the Nation most highly effective in the time of need.

The Medical Profession as possessors of a maximum amount of intelligence

will, as a rule, be able to point out the needs of the times better than most professions. We are proud of the immediate response to the call of the Nation for medical men, we will now go further and stimulate the proper training of all other men in order that in time all nations will so respect the United States as to know that injuring her citizens will be met with instant retribution.

The Chamberlain Bill for Universal Training seems to fit the indications and conditions of our people and should be adopted by Congress. It provides for the separation of the criminal and diseased, for every possible proper environment for our boys and is so arranged as not to materially take the young man from other important phases of his life or to interfere with his success in life.

---

### THE STATE ASSOCIATION FOR THE PREVENTION OF TUBERCULOSIS.

This organization, a constituent part of the National Association, has secured the services of Mr. Jules Schevitz, an expert in the staging of propaganda looking to the lessening of the Nation's most potent destroyer and weakener of our citizenship—tuberculosis. Mr. Schevitz comes fresh from long employment with the National organization and has only recently made a state survey as to tuberculosis of New Jersey.

Oklahoma physicians, long earnestly interested in the suppression of tuberculosis, now have an opportunity to cooperate with a permanent working body that in the end must do incalculable good along its chosen lines. No means is left untouched to this end. Every avenue by which the growing youth, the business man and the afflicted may be reached is taken advantage of and by skilled men who have by past experiences noted the defects in past campaigns.

Every physician should lend his immediate aid to making the usual Red Cross Seal Sale a success. This is one of the means used to raise the needed funds and the demand comes in such a pleasant manner that no one fails to assist by purchasing if his attention is called to the matter. The State has been divided as to funds to be raised by subscription, each county and city having a definite amount allotted which it is hoped to raise. In some sections the raising of this fund has been made a part of the general plan to raise all other funds, all demands being incorporated in one visit to the prospective donor.

---

### WE WHO COULD NOT GO.

By L. HAYNES BUXTON, M. D.,  
Chairman Oklahoma State of Committee National Defense,  
Medical Section.

Because we could not enter active army service makes it a special duty for us to do our very best at home for the cause and for the men who have sacrificed so much.

A great injustice is being done to the medical men who have volunteered for service in the army, because of the old ruling that these men could hold no commissions higher than that of major.

This condition came about through the closed-door policy to civilian service in pre-war times.

The Medical Relief Corps contains today many of the most eminent surgeons and specialists of our country. These men have sacrificed private business that has taken the best part of a life time to establish. In fact no class of men have given so freely for their country's cause as have the medical profession.

There are 20,000 of these officers in the United States, and under Senator Owen's amendment to Senate bill 1786, they should be given one Major General

and one Brigadier General for every four hundred officers, four Colonels and four Lieutenant-Colonels for every one hundred officers.

Why should not requests and orders issued by these men be backed up by the authority which appropriate rank alone gives?

Again, these men deserve the recognition in the public eye, to which their services and sacrifices entitle them. Why not give them an equal standing with like men with the Allies Armies?

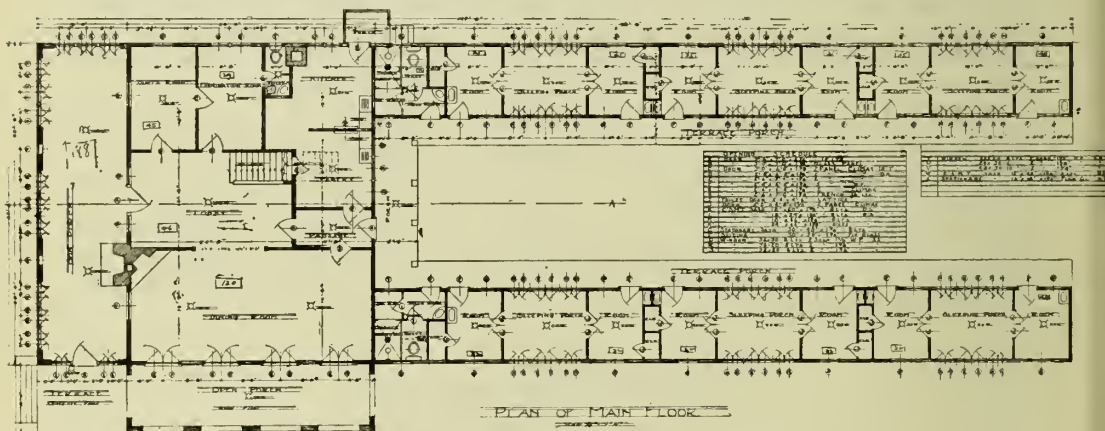
Right now, today, we can help; let every man write to one of Oklahoma's Congressmen (address it to Washington, D. C.) and also to one of the Senators from your native state asking that he give his assistance to Senator Owen's amendment to Senate bill 1786. This bill is on the calendar and may come up early in December.

In the Journal of the A. M. A. of November 10th is an editorial upon this subject.

### THE OKLAHOMA COTTAGE SANATORIUM FOR THE TREATMENT OF TUBERCULOSIS.

The accompanying cuts show the floor plans of the new building of the Oklahoma Cottage Sanatorium for the treatment of tuberculosis at Oklahoma City.

The new site is at 43rd Street and Western Ave., adjoining the Oklahoma City Golf and Country Club grounds, two blocks from the Belle Isle and inter-



urban car lines and one block from paved streets. It is unique in that it possesses all the advantages of the country, and yet admits of all the conveniences of the city.

The site is high and dry and commands a splendid view of the surrounding country, including the north side of the city. The beautiful Country Club grounds and the golf course can be seen from every porch in the building, also the new state capitol which is over two miles away.

The building which is modern in every respect will accommodate about twenty patients. While the plans and construction have been dominated by the patients' interests, the completed building is very attractive and thoroughly satisfactory from an architectural standpoint.

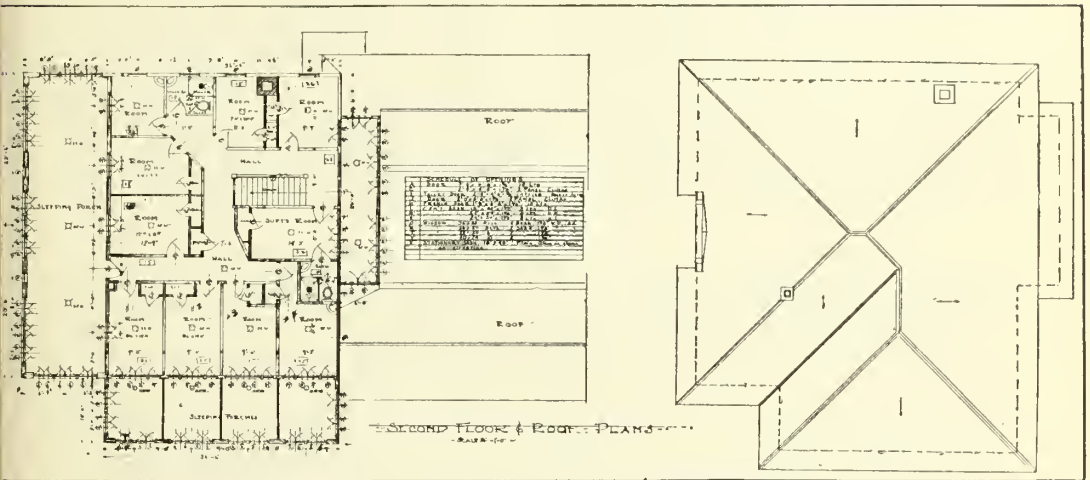
Every bed-room connects with a porch and every porch has a south exposure. All the rooms have wide doors which permit the beds to be rolled back and forth. The first floor of the main building has in addition to offices and kitchen, a beautiful sun parlor, dining room and lobby.

The rooms are equipped with specially designed sanitary basins and supplied with hot and cold water. The bath rooms are equipped with showers and separate



dressing and wash rooms. The main part of the building is to be heated with gas steam radiaters. The furnishings are to be new throughout and the place is to be made as attractive and home like as possible.

The institution was established through the energy and foresight of Dr. L. J. Moorman of Oklahoma City, who long ago saw the pressing need of a place near the home of Oklahoma's tuberculous where they could receive the proper care in keeping with modern ideas of treatment. The success of the enterprise is attested by the fact that since its opening in August, 1915, sixty patients have been received for treatment. Of this number it is of more than passing interest to note that one



died in the institution, five died after leaving, four of these in cases far advanced on admission, one was due to heart failure superinduced by cardio vascular disease, with very slight tuberculous involvement, and one in the case of a boy who left the institution rather than submit to a proper regime. Most all the others are at work. Friends of the sanatorium have built and furnished two tent cottages and have extended help to patients to the extent of \$1566.30, while the sanatorium has extended help to the helpless to the extent of \$939.15, making a total of \$2505.45.

## CURRENT MEDICAL LITERATURE

Conducted by

DRS. CURT von WEDEL, Jr., and L. J. MOORMAN, Oklahoma City  
and FRED J. WILKEMEYER, Muskogee

### DEFINITIONS AND DIAGNOSTIC STANDARD IN THE DIAGNOSIS OF PULMONARY TUBERCULOSIS IN ADULT.

By John B. Hawes, 2d, M. D., Boston.

The following is a revised draft submitted by the writer to a committee of tubercular experts.

#### Definitions.

1. **Loss of Weight.** By loss of weight should be understood an unexplained loss of at least 5 per cent below normal limits for that individual within four months time.

2. **Loss of Strength.** By "loss of strength" in its pathological sense is meant undue fatigue and lack of staying power which are unusual for that individual patient and which cannot be satisfactorily explained.

3. **Fever.** An occasional temperature of 99 degrees should not be considered "fever." A temperature which persistently runs over 99 degrees when taken at least four times a day over a period of a week (by mouth five minutes) should be considered of significance and constitutes fever.

**4. Elevation of Pulse.** Where the average normal pulse of the patient is known, an elevation of 15 beats a minute, when the pulse is taken quietly at home during various periods of the day, should be considered abnormal. In cases where the average pulse is not known—and of course this constitutes the majority of cases—one should consider an average pulse of 85 or over, even in men, and 90 or over in women, to be abnormal. The combination of a subnormal temperature and an elevated pulse as defined here should be of great importance.

**5. Hemorrhage.** Any amount of blood, with or without sputum, requires medical investigation as to its source. Blood streaks, blood spots, etc., may or may not mean tuberculosis. On the other hand, a hemorrhage amounting to one or two teaspoons is presumptive evidence of the disease.

**6. Family History.** An occasional tuberculosis in the patient's uncles, aunts, cousins, etc., should not be considered of importance. It is an important fact when the patient's immediate relatives, such as father, mother or grandparents, have been tuberculous.

**7. Exposure.** Childhood exposure, no matter how slight, is of the greatest importance. Moderate exposure among normal, healthy adults of cleanly habits is of less importance. Of course, prolonged contact, with unhygienic habits or surroundings, may be a dangerous factor at any age.

**8. Cough.** No cough is characteristic of tuberculosis. A persistent cough for six weeks requires investigation. Tuberculosis can exist without any cough whatsoever.

**9. Sputum.** The presence of sputum is not necessary for a positive diagnosis. Constant sputum, with or without cough, requires investigation. Absence of bacilli, after one or several laboratory examinations is not necessarily proof against the presence of tuberculosis.

**10. Any Hoarseness.** Any hoarseness or persistent "huskiness" requires investigation.

#### Diagnostic Standards.

**11.** When constitutional signs and symptoms and definite past history are absent or nearly so, there should be definite signs in the lungs, including persistent rales at one or both apices. By "persistent" it is meant that the rales must be present after cough at two or more examinations, the patient having been under observation at least one month.

**12.** In the presence of constitutional signs and symptoms, such as loss of weight and strength, etc., as defined above, there should be demanded some abnormality in the lungs, but not necessarily rales.

**13.** Usually a process at the apices should be considered tuberculous, and a process at the base to be non-tuberculous until the contrary is proved.

**14.** A hemorrhage as defined above is evidence of active pulmonary tuberculosis until the contrary is proved, except when a clear history of pleurisy is present.

**15.** One should consider a typical pleurisy with effusion as presumptive evidence of tuberculosis. One should also consider a dry pleurisy as evidence of slight tuberculosis.

**16.** Pain in the chest and shoulders, night sweats, digestive disorders, etc., may be present and should be investigated.

**17.** In every doubtful case one should demand that the patient be kept under observation for at least one month, with repeated sputum examinations, before making a definite diagnosis.—*Abstracted from Boston Medical and Surgical Journal, August 2, 1917, pp. 145-6.* By Fred J. Wilkiemeyer, M. D.

#### WHEN IS THE DIAGNOSIS OF TUBERCULOSIS WITHOUT POSITIVE SPUTUM JUSTIFIED?

By Darid R. Lyman, M. D., Wallingford, Conn.

In considering when a diagnosis without positive sputum is justified, it might be well to try to arrive at some idea how often the diagnosis must be made. With this in view the writer has gone over the laboratory records of 1638 cases discharged from the Gaylord Farm in the past twelve years. These show 1076 in which the sputum was positive, and 562, or just over one-third, with no bacilli. The 562 negative cases, instead of all being "incipient" or "suspects," were divided as follows: incipient, 244; moderately advanced, 297; far advanced, 21; more than half showing well-developed lung signs. The probability of correct diagnosis in the series is further strengthened by the fact that in 51 cases there was tuberculosis elsewhere; 18 had pleurisy with effusion, 126 had hemorrhage,—and these included only frank hemorrhage, and not blood-streaked sputum—97 gave positive tuberculin reactions to doses ranging from 1 to 7 mg. of old tuberculin given subcutaneously, and 76 died from tuberculosis after discharged. We thus have the diagnosis confirmed in 368 of our 562 cases. When we take into consideration the fact that the large majority of these cases had been diagnosed before coming to the hospital, it would seem that we were entitled to claim a fair degree of accuracy for the diagnosis, even though one-third of all our cases show negative sputum.

The study of those having positive findings emphasizes again the futility of depending on sputum for diagnosis. The laboratory routine at the Farm has been to make daily examinations for at least a week in all cases with negative sputum, and to re-examine monthly in all cases. They had 1076 cases with positive sputum. In 213 of these the sputum was negative occasionally; in 56 it was negative as often as positive; in 42 negative twice for each positive findings; in 63 negative three times for each positive finding; in 70 negative five times; and in 39 negative ten times for each positive finding.

We thus have of our 1076 positive cases, 483 whose sputum at times would have failed to support the diagnosis, and of the series of 1638 cases only 593 whose sputum was positive at all examina-

tions. It should be borne in mind that these cases are classified approximately one-half as "moderately advanced," and one-fourth "incipient," and one-fourth "far advanced." One will readily see how very important it is for us to cease giving too great prominence to negative sputum findings if we are to make any advance in our early diagnosis of this disease. If the history, symptoms and signs point to tuberculosis we should make our diagnosis in the face of *persistent* negative sputum. In one case of the series, the bacilli were found at the 38th examination, and in several there were over twenty negative results before they appeared. In 173 cases the sputum was negative from three to ten times for every positive result. With only 593 out of 1638 cases showing constantly positive sputum, it is evident that a negative sputum is not sufficient ground for excluding tuberculosis.

What are the conditions under which we are justified in making a diagnosis of pulmonary tuberculosis in the face of negative sputum findings?

**First, History.** Few practitioners seem to realize the supreme importance of an accurate history, both as to family and person, in tuberculosis. It is the one best guide to a correct diagnosis, and the most difficult to obtain. Tuberculosis is a disease of childhood, often lying latent for long periods, to awaken under the strain of adult life.

**Family History.** It is not enough to ask whether father, mother, sisters, brothers, etc., had tuberculosis. Remember that tuberculosis very often passes undiagnosed, and in every case where in doubt, question very closely as to the presence of chronic cough, bronchitis, asthma, catarrh of the lungs or hemorrhage, as well as fistula, and other forms of tuberculosis among the family group. The importance of any such history is in exact ratio with the extent to which the patient was associated in childhood with the relatives so affected. *He is a very brave (or foolish) physician who will assure his patient that he absolutely has no tuberculosis, in the face of a strong family history or a definite exposure in childhood.*

**Personal History.** History of persistent, enlarged cervical glands, or of fistula in ano, or other tuberculous foci are of course of primary importance. Primary pleuritis always imply tuberculosis. Being "subject to colds" is another suggestive story. Usually the patient states that he has had "bronchial catarrh" or "grippe" every winter, with a cough that "hung on." Of much value is the history of having been frequently "run down" and having had to go to the country for a month or two every few years. Beware of diagnosis of "malaria." Careful questioning reveals a story of periods of loss of weight and strength, slight fever and malaise recurring almost yearly and connecting most logically with the present signs and symptoms. Hemorrhage from the lungs always means tuberculosis (except carcinoma and cardiac disease) and you may feel sure of giving your patient his best chance if you base your diagnosis on it even without other signs and symptoms.

**Second, Symptoms.** The chain of symptoms which are of greatest importance in diagnosing tuberculosis are: persistently rapid pulse, afternoon or evening rise in temperature, loss of weight, loss of strength, and persistent cough. In the persistence of any two of these without explainable cause, tuberculosis must be considered. Remember that overwork and dissipation produce loss of weight and strength; that chlorosis, hyperthyroidism and neurotic conditions may show the rapid pulse; that women at the menstrual period often show a similar rise in temperature, as well as pulse; that malaria may be responsible for such a chain of symptoms; and that there is such a disease as syphilis. The physician should realize the value of accurate records of temperature and pulse in his doubtful cases (*out of 1940 physicians consulted by the last 1000 of our patients only 13.4 per cent saw fit to take the temperature even once*).

**Third, Physical Signs.** The physical signs of early tuberculosis are usually very slight, and a positive diagnosis should often be made when there are no signs present in the chest. It is not at all rare to see hemorrhages in patients whose chests are apparently clear, or to find tubercle bacilli in the sputum of such a case. Remember that one can get bacilli and even hemorrhages from a very small focus, and that the lung is a deep seated organ and covered with tissues such as bone, fat, skin and muscle, each with a different capacity to transmit sound. It is possible for fairly large cavities to be situated in the upper lobes of the lungs and yet get no sign on examination even in expert hands. It is the location and persistence of the sounds rather than their character which must be our guide as to their probable tuberculous character. In tuberculosis, the invasion is along the lymphatic system supplying a lobe or a lobule or group of lobules, and the resulting bronchitis is localized. Hence persistent signs of localized bronchitis are to be considered tuberculous when occurring in the apices or upper lobes.—*Abstracted from the Boston Medical and Surgical Journal, August 2, 1917, pp. 135-138.*  
By Fred J. Wilkiemeyer, M. D.



## PERSONAL AND GENERAL NEWS

**Dr. P. G. Murray**, Thomas, is in Chicago doing special work.

**Dr. J. S. Allison**, Tahlequah, visited Chicago clinics in October.

**Dr. L. H. Winborn**, Tuttle, is doing postgraduate work in Chicago.

**Dr. C. W. Tedrowe**, Woodward, visited Chicago clinics in November.

**Dr. J. M. Stephens**, Hastings, is recovering from an automobile accident.

**Dr. L. S. Munsell** and Mrs. Mary Centers of Beaver were married October 30th.

**Dr. J. C. Stevens**, Drumright, announces that he will soon open a modern hospital in that city.

**Dr. W. T. Salmon**, Oklahoma City, made a hurried trip to New York and Baltimore early in November.

**Dr. and Mrs. H. L. Dalby**, formerly of Wilhurton, are visiting friends there after a long absence in California.

**Dr. J. M. Mattenlee**, Sapulpa, has returned from Ohio where he visited friends. He drove through by auto.

**Dr. and Mrs. H. A. Lile**, Aline, are in Chicago where Dr. Lile is looking into the clinics and the high cost of living.

**Dr. Lea A. Riely and family**, Oklahoma City, have returned from a month's visit to New Orleans, Washington and Baltimore.

**Dr. Lee W. Cotton**, Enid, was operated for appendicitis while on attendance at the Medical Association of the Southwest.

**Dr. L. H. Carleton**, Tulsa, has been appointed resident physician of Oklahoma Hospital, Tulsa. He is a graduate of Oklahoma University.

**Dr. J. M. Bonham**, Hobart, was elected vice-president of the Medical Association of the Southwest for Oklahoma at the Kansas City meeting.

**Dr. J. M. Stallings**, Tishomingo, has accepted a year's internship in the eye department of Bellevue and will remain in New York for a year.

**Dr. Bruce Younger**, of Marietta, died after a short illness while with his relatives in Whitesboro, Texas. Press dispatches do not indicate the cause of death or give the details.

**Dr. C. S. Bobo** has taken the count, so far as his friends know, for the first time in his life. A carbuncle on his neck sent him from the trenches at Norman to Oklahoma City, and a surgeon did the rest.

**Dr. J. A. Norris**, Okeene, has returned from an extended trip through Iowa and the eastern states. While away Dr. Norris visited New York, Washington, Philadelphia and Boston, incidentally making many of the delightful side trips offered to the visitor.

**Mrs. J. L. Hoshall**, Oklahoma City, has sued the Oklahoma Publishing Co. of that city for \$26,000 for the death of her husband and personal injuries. It is said that Dr. Hoshall's death was due to his attempt to avoid an unlighted delivery wagon of the company, the effort overturning his car and killing him instantly.

**Medical Reserve Appointments:** Supplementary list, Oct. 1st to 12th inclusive. George Bennett Scott (Col.), Ardmore; Arthur Huy Hunt, Howe; Georgia M. Combest, Lamar; R. R. Holcombe, Muskogee; J. H. Stolper, Muskogee; Thomas L. Lauderdale, Oklahoma City; Virgil Berry, Okmulgee; Samuel Erskin Mitchell, Stigler; John F. Duckworth, Tahlequah.

**The Medical Defense Section** of the State Council of National Defense met in Oklahoma City November 11th. Many physicians from over the State attended the meeting, which had for its object a further and continued selection of physicians to meet any possible increase in demands that may be made on the medical profession due to the changes in the war situation.

**To Officers of the Medical Reserve Corps, U. S. Army, Inactive List.** Word received from the Surgeon General of the U. S. Army, conveys the information to officers of the Medical Reserve Corps of the United States Army, inactive list, that assignment to active duty may be delayed, and that they are advised to continue their civilian activities, pending receipt of orders. They will be given at least 15 days notice when services are required.

**Dr. and Mrs. Newton Rector**, Hennessey, recently celebrated the 59th anniversary of a long and happy wedded life. The life of Dr. and Mrs. Rector has been not always the placid life of a physician and his wife. One of the earliest to enlist in Illinois, he led an eventful career as a soldier and on finally receiving severe wounds at the battle of Resaca, Mrs. Rector succeeded in joining him at the Army hospital, after which time she became the hospital "angel," for she not only supplied her husband with delicacies that were almost unobtainable but aided in care of the men in the ward as well. The Journal takes this occasion to wish them a continuance of a satisfied and useful life.

**The Northeastern District Medical Society** met in Tulsa November 6th. The principal features of the meeting were at the Walter E. Wright Laboratories. Following is the program: Motion Pictures 2:30 p. m. 1. War Neuroses. Talks by Dr. John W. Duke, Guthrie, and Dr. F. M. Adams, Vinita. 2. Carrel Technique in the Treatment of Infections of Bones and Joints. Remarks by Dr. Chas. S. Neer, Vinita, and Dr. A. H. Herr, Okmulgee. 3. Sigmoidectomy, Fistulectomy and Removal of Peri Oral Condylomata. Remarks by Dr. C. M. Ament, Sapulpa, and Dr. G. A. Wall, Tulsa. Stereopticons. 1. Bones—Traumatic and Pathological Conditions. Discussion, Dr. H. D. Murdock, Tulsa. 2. Chest. Remarks by Drs. W. R. Marks, Vinita, and Roscoe Walker, Pawhuska. 3. Gastro-Intestinal. Discussion by Dr. C. H. Ball, Tulsa.

**The State Commissioner of Health** announces that only the business part of his office has been moved to Oklahoma City, that all laboratory and serological work is still conducted at Guthrie.

**State Committee of National Defense—Re-organization.** The medical section of the Oklahoma Committee of National Defense met November 11th, at the Lee Huckins Hotel, Oklahoma City, for re-organization. This was made necessary from the fact that a large number of the old committee had been assigned to Military duty and are now in active service. The former Chairman of the Committee, Dr. Fred H. Clark, of El Reno, is now Major at Ft. Oglethorpe; Major A. L. Blesh of Oklahoma City, has recently been ordered to Ft. Oglethorpe; Major Floyd J. Bolen, also of Oklahoma City, is at Camp Bowie; Capt. L. S. Willour of McAlester, and Lieut. R. V. Smith of Tulsa, are also in active service. All of the above were former members of the committee. The committee was re-organized by the election of Dr. L. Haynes Buxton of Oklahoma City as Chairman, and Dr. Horace Reed of Oklahoma City, Secretary. The old members held over were Drs. LeRoy Long, Rex A. Bolend and W. E. Dicken, of Oklahoma City, Dr. W. E. Cook of Tulsa, Dr. John W. Duke of Guthrie, Dr. C. R. Hume of Anadarko, Dr. Claud A. Thompson of Muskogee. The following new members were elected and were present at the meeting: Dr. Chas. L. Reeder of Tulsa, Dr. T. R. McCarley of McAlester, Dr. Walter Hardy of Ardmore, Dr. J. M. Workman of Woodward, Dr. A. S. Risser of Blackwell, Dr. C. H. Weber of Bartlesville, and Dr. Ney Neel of Mangum. The special duties of this committee are to secure medical officers to supply the demands of the Army, to pass on their qualifications and use every agency to make more efficient the medical and sanitary service of the army.

## MISCELLANEOUS

### ACTION OF THE STATE COMMITTEES OF THE MEDICAL SECTION, COUNCIL OF NATIONAL DEFENSE.

**Urging immediate action providing for at least six months of intensive military training of all young men in their nineteenth year, to become operative as soon as the army cantonments are available; also recommending physical training in schools, etc.**

The following resolutions were adopted unanimously at a meeting of Committees from all states (except Maine and Delaware), held in the Congress Hotel, Chicago, October 23, 1917:

*Whereas*, The experience through which the United States is now passing should convince every thoughtful person of the necessity for the universal training of young men, not only for the national defense in case of need, but also to develop the nation's greatest asset—its young manhood—in physical strength, in mental alertness, and in respect for the obligations of citizenship essential in a democracy; therefore, be it

*Resolved* by the State Committees of the Medical Section of the Council of National Defense that they strongly urge the adoption by our government at this time of a comprehensive plan of intensive universal military training of young men for a period of at least six months, upon arriving at the age of nineteen years; and that this body also support the movement to secure the introduction into public schools of adequate physical training and instruction;

*Resolved*, That the members of each State Committee immediately take active steps to insure public support for the subject of these resolutions through the newspapers, through public meetings and through the appointment of committees in each county; also that copies of these resolutions be forwarded to the Senators and Members of Congress in their respective states, with a personal request that favorable action be taken at the coming session of Congress upon a measure following the principle of the Chamberlain Bill and to become operative as soon as the army cantonments are no longer required for the training of the forces in the present war;

*Resolved*, That each State Committee from time to time report to the Medical Section of the Council of National Defense as to action taken and progress secured in their several states.

### TYPICAL "NEGLIGENCE" CASES AND SOME REASONS FOR THE FORMATION OF THE INDEMNITY DEFENSE FUND.

We have on several occasions stated in these columns that many of our members are under the mistaken impression that claims for malpractice and actions for alleged negligence and carelessness are as a rule asserted and filed only against the younger members of the profession—those who might be regarded as less skilled or experienced, or against whom some imputation of recklessness might be made. Nothing could be further from the truth. We have also stated on a number of occasions in these columns, and we do not hesitate to say again, that ignorance or rapacity do not discriminate in the selection of their victims, and that the oldest, best qualified, and most experienced of our number are just as much the subject of attacks for alleged malpractice as any others.

To point these statements we will quote a few typical cases from our legal defense files (names and other identifying data being, of course, omitted).

Case 1: A physician of forty years' experience, a graduate and post-graduate of two or more leading colleges of medicine, is called to attend a patient suffering from a bone felon. He prescribes a



recognized standard surgical dressing, finally lances the finger and gives proper and careful instruction as to cleansing, etc. He is then discharged by the patient, who does not think a doctor's services necessary any longer, and who thereafter undertakes the treatment of the finger himself. He permits infection to go on and the finger has to be amputated. The patient then sues the doctor for \$10,000.

Case 2: A patient, riding in an automobile which collides with a railroad train, sustains seventeen fractures of the arms, legs and ribs. He hovers between life and death for a month. The physician, fully experienced and qualified, by the use of special appliances, secures and maintains the correct apposition on all fractures, carries the patient beyond the effects of the shock, threatened pneumonia, and even takes the precaution to have his treatment checked and approved from time to time by an able consultant. The patient discharges the physician at the end of seven weeks and files suit for \$25,000 for negligently delaying recovery.

With few exceptions the foregoing are fair samples of what our legal defense records disclose. Such claims are being asserted against our members on an average of about eight per month. Ridiculous as they may appear from the standpoint of medical science, they are nevertheless a menace to the individual involved, and require skilful and vigorous handling in his interests.

If you have not gone through an experience of this kind, why not accept the judgment of your representatives and officers and those who have met with such accusations, and fortify yourself and protect your family against possible adverse judgments? The Indemnity Defense Fund was formed to meet this situation.—*California State Medical Journal*.

### CHIROPRACTIC TREATMENT FOR "CRABS".

A member sends the following clipped from a chiropractic publication. As our correspondent says: It shows the profound (?) depths to which chiropractic investigation goes, and will no doubt make the race of *pediculi pubis* tremble in abject fear:

#### Case Inquiries and Answers.

INQUIRY, CASE NO. 1013. "I am a constant reader of your paper (weekly) known as the Chiropractor.

"I am writing regarding a young man I have for a patient age 21. Good build and in perfect condition with the exception of the region known as the hypogastric and also pudendalis. Pubis vulgarly called by the laity crab.

"I find on examination of his spine an abnormal condition of the 1st lumbar, otherwise he seems to be in good condition and has perfect health.

"I have adjusted him twice and lo and behold upon examination I find they have multiplied 10 fold much to his discomfort.

"I have done my best to alleviate the untold suffering but of no avail.

"The last time I adjusted him I endeavored to pick some of them out after following this procedure for thirty minutes I became discouraged and stopped.

"Do you think this is a surgical case?

"Can you tell me the ultimate prognosis? He says several of his friends have the same condition but if the parasites grow on his friends and adhere so close don't you think a surgeon would be best.

"I realize that you are Peer of Chiropractors and second to none in judgment and skill."

ANSWER, CASE NO. 1013. The 1st lumbar you have found is the major in this case but it should be in combination with K. P. as the two go together in all conditions where parasites are found. Under adjustment you have probably caused much internal poisonous secretions to come to the surface. The quicker he gets this out of his system the better. It should go via kidneys but in the absence of perfect action there then the skin is better than having it stay in the body. By no means is this a surgical case. Continued adjustment is all he needs. It may be aggravating but nevertheless he can and will get well. Be patient and don't get discouraged. It may be a severe type and take somewhat longer than an acute case.—*Ohio State Med. Journal*.

### CLINICAL DATA ON "DICHLORAMINE-T."

The Official Bulletin of the United States Government, published daily under order of the President by the Committee on Public Information, states, in the issue of October 31, 1917: "Many matters of importance touching upon American cooperative effort and activity along medical and surgical lines were developed during the past week in Chicago, when the general medical board and the States activities committee of the medical section of the Council of National Defense held stated meetings in conjunction with the annual meeting of the Clinical Congress of Surgeons of North America.

"Addresses were made by Dr. Edward Martin, Dr. E. K. Dunham and Dr. W. E. Lee, all of Philadelphia.

"By means of a moving-picture demonstration and the detailing of experimental and clinical data, they showed how much could be done for clean wound healing by the new antiseptic, Dichloramine-T, which is being investigated under instructions from the Surgeon General's Office."

Dr. W. E. Lee, of the Pennsylvania Hospital, reported 7,288 surgical cases in which "Dichloramine-T" was used with remarkable results. He also reported twelve hundred war wounds treated in France with "Dichloramine-T" with 99.5 per cent recoveries and no secondary hemorrhages.



"Dichloramine-T" is used as an oil spray for nasal and throat work to destroy the microorganisms of diphtheria, meningitis, and other diseases. It is also used as a spray for surface wounds and burns and is poured into deep wounds, thus doing away with intermittent or continuous irrigation and frequent changes in expensive dressings.

Literature on "Dichloramine-T" may be obtained from the manufacturers of this product, The Abbott Laboratories, Chicago.

### STATE BOARD OF MEDICAL EXAMINERS MEETING

October 9-10-1917.

#### LICENSES GRANTED BY RECIPROCITY.

Arthur D. Donnelly	Vanderbilt	1916	Chickasha, Okla.	Tenn.
John Homer Barham	Arkansas University]	1914	Tar River, Okla.	Ark.
Jas. Franklin Baker	Physio. Med. College	1896	Isom Springs, Ok.	Tex.
Wm. Cicero Eubanks	Pulte Med. College	1892	Tulsa, Okla.	Ky.
Thos. Milas Gordon	Baylor University	1915	Kingston, Okla.	Tex.
Albert Jas. Campbell	Missouri University	1904	Tulsa, Okla.	Mo.
Errett Campbell Myers	University of Maryland	1879	Hot Springs, Ark.	Ark.
Fred Erland Deal	Kansas City University	1912	Miami, Okla.	Kas.
Jas. E. Buchanan	Beaumont Med. College	1887	Haskell, Okla.	Mo.
Chas. Robert Humbert	Howard University	1915	Kansas City, Mo.	Mo.
Oran Rips	Creighton Med. College	1915	Tulsa, Okla.	Neb.
Earl Newcomb Pender	Creighton Med. College	1915	Tulsa, Okla.	Neb.
Wm. A. Houser	Memphis Hosp. Med. Col.	1893	Tishomingo, Okla.	Tex.
Thos. B. Richardson	St. Louis Col. P. & S.	1897	Gotebo, Okla.	N. M.
Inman Wm. Cooper, Jr.	Tennessee University	1903	Newton, Miss.	Miss.
Oscar Alvin Flanagan	Kentucky University	1904	Tulsa, Okla.	Ind.

#### BY EXAMINATION.

Merle Q. Howard	Oklahoma University	1916	Oklahoma City
Frank P. Miller	Rush Medical College	1916	Urich, Mo.
Chas. A. Dillon	Univ. of Pennsylvania	1910	Tulsa, Okla.
John P. Grimes	Ill. Univ. Med. Dept.	1899	Chester, Ill.
Arthur Anderson	Louisville University	1911	Arlington, Kas.
Elmer J. Stredder	St. Louis Col. P. & S.	1888	Geneseo, Kas.
Jos. Edward Cochran	Memphis Hosp. Med. Col.	1913	Coleman, Okla.
Philip Aubrey Witt	American Sc. Osteo.	1917	Okmulgee, Okla.
Andrew Grant Cowles	Tulane University	1914	Ardmore, Okla.
Vera Buckheit	American Sc. Osteo.	1917	Ardmore, Okla.
Harry Kirshenbaum	Oklahoma University	1916	Brooklyn, N. Y.

#### BY RE-REGISTRATIONS.

A. Johannes Black	Okmulgee, Okla.	Jesse Pendergraft	Ione, Ark.
Eugene Pile	Blackwell, Okla.	E. C. Lane	Ada, Okla.
J. M. McInnis		Brooklyn, Miss.	

#### COUNCIL ON PHARMACY AND CHEMISTRY—ARTICLES ACCEPTED.

**General Drug Co., New York:** Arsenobenzol (Dermatological Research Laboratories, Philadelphia Polyclinic).

**Jno. T. Milliken & Co.:** Acetylsalicylic Acid Capsules-Milliken. Acetylsalicylic Acid Tablets-Milliken.

**Monsanto Chemical Works:** Acetylsalicylic Acid (Aspirin), Monsanto.

**Schering and Glatz:** Atophan, S. & G.

**E. R. Squibb and Sons:** Silver Protein-Squibb.

**Standard Oil Company of Ind.:** Stanolind Surgical Wax.

#### NEW AND NON-OFFICIAL REMEDIES.

**Halazone-Abbott.**—Parasulphonedichloramidobenzoic acid. It is said to act like chlorine and to have the advantage of being stable in solid form. In the presence of alkali carbonate, borate and phosphate it is reported that halazone in the proportion of from 1,200,000 to 1,500,000 sterilizes polluted water. Halazone is used for the sterilization of water in the form of Halazone tablets, each containing 0.004 gm. halazone mixed with sodium carbonate and sodium chloride. The Abbott Laboratories, Chicago (*Journal A. M. A.*, Oct. 6, 1917, p. 1166).

**Camiofen Ointment.**—An ointment obtained by mixing iocamfen (a liquid obtained by the interaction of iodine 10, phenol 20 and camphor 70 parts) with an equal weight of a lard-wax-oil of theobroma base, but containing nearly all of its iodine in the combined form. It has the properties of fatty iodine compounds, phenol and camphor, and is used in skin diseases. Schering and Glatz, New York (*Journal A. M. A.*, Oct. 20, 1917, p. 1343).

## NEW BOOKS

### MEDICAL WAR MANUAL NO. 1.

#### Sanitation for Medical Officers.

Authorized by the Secretary of War and Under the Supervision of the Surgeon-General and the Council of National Defense. By Edward B. Vedder, Lieut.-Colonel, Medical Corps, U. S. A. Illustrated. Leather 211 pages. Price \$1.50. Lea and Febiger, Philadelphia.

This is a very handy little volume, containing at intervals blank pages for the inclusion of notes and such other matter as the user may wish to include. Everything pertaining to the War at this time is of great interest, not only to the several thousand men who are commissioned or are receiving training at the camps and cantonments, but this is specially useful to the civilian physician as well.

The work is very complete, containing all necessary revisions of existing War Department Orders, now applicable on account of changes made necessary by the newer knowledge of warfare. The general subdivisions are: The Camp; The March; Trenches and the Battlefield; Insects Concerned in the Transmission of Disease and Notes on Transmissible Diseases. It tells the physician just how often a thing should be done about the camps and exactly how it should be done even to the height the water can must be from the ground, the cleaning of corrals, the care of kitchens, latrines, company urinals, and lays especial stress on the orderly sequence of inspections which make up so much of the Army Surgeons work.

### THE SURGICAL CLINICS OF CHICAGO.

**The Surgical Clinics of Chicago**, Volume I, Number IV (August 1917). Octavo 206 pages, 70 illustrations. Philadelphia and London: W. B. Saunders Company. 1917. Published bi-monthly: Price per year: Paper \$10.00; Cloth \$14.00.

Especially to be noted in this issue is "The Diagnosis and Treatment of Common Duct Calculi, With Special Reference to Overlooked Common Duct Calculi," by Eisendrath, whose particular forte is thoroughness in operation, drainage and removal of *all* the stones. Anything he may have to say on this subject is always interesting and worth while. "Semilunar Cartilage: Fracture Dislocation and Fragmentation" is handled by Philip H. Kreuscher. "Mechanical Aids in the Diagnosis of Lesions of the Upper Urinary Tract," by J. S. Eisenstaedt, is a subject of great interest to both internist and surgeon. The volume is full of other surgical matters, benign and malignant conditions, aids to diagnosis, decompression operations and similar good things.

### A MANUAL OF ANATOMY.

**A Manual of Anatomy**. By Henry E. Radasch, M. Sc., M. D., Assistant Professor of Histology and Embryology in the Jefferson Medical College, Philadelphia. Octavo of 489 pages with 329 illustrations. Philadelphia and London: W. B. Saunders Company. 1917. Cloth \$3.50 net.

The author of this volume places before the profession a work of moderate size making it easy of access and convenient form. While many of the illustrations are from contemporary works on anatomy, much original matter has been added from photographs of organs and preparations at the Daniel Baugh Institute of Anatomy and Biology. The work should appeal to the student and practitioner.

### MUSSEY-KELLY—PRACTICAL TREATMENT.

**Practical Treatment**, Volume IV. By 76 eminent specialists. Edited by John H. Mussey, Jr., M. D., Associate in Medicine, University of Pennsylvania; and Thomas C. Kelly, M. D., Instructor in University of Pennsylvania. Desk Index to the complete set of four volumes sent with this volume. Octavo 1000 pages, illustrated. Philadelphia and London: W. B. Saunders Company. 1917. Cloth, \$7.00 net; Half Morocco, \$8.50 net.

This is a part of a remarkable system of medical treatment, each article, as indicated, being a monograph on the subject by a well known authority capable of giving the best interpretation of modern ideas on the particular subject under his charge.

To give the reader an idea of the world wide range of eminence called on to create the system we note, in part only, some of the names contributing it: Abt, Allbutt, Bloodgood, Deaver, deSchweinitz, Dock, Dyer, Gorgas, Hudson-Makuen, the Mayos, Moynihan, Roseneau, Schamberg, Sippy, Stengel, Thompson and Wood. It goes without saying that it is a good work.

## INDEX TO CONTENTS, VOLUME TEN

January to December, 1917.

## CONTRIBUTED ARTICLES.

Abdominal Drainage from an Anatomical Standpoint.....	3
Acidosis of Pregnancy.....	371
American Proctologic Society, A Condensed Report of.....	25
Anaesthesia.....	108
Annual Meeting:	
President's Address.....	223
Chairman's Address. Excuse for the Creation of the Section of Genito-Urinary, Skin and Radiology.....	227
Chairman's Address, Section on Pediatrics and Obstetrics.....	228
Chairman's Address, Section on Eye, Ear, Nose and Throat. Report of Case.....	230
Transactions of the House of Delegates.....	233
General Meeting.....	236
Proceedings of the Council.....	240
Report of the Chairman of the Committee for the Study and Prevention of Pellagra.....	240
Report of the Committee on Tuberculosis.....	242
Report of Committee to Visit Ft. Sill.....	243
Resolution on Doctor's Club.....	244
Necrology Committee Report.....	244
Committee on War Situation.....	245
Report of Secretary-Treasurer-Editor.....	246
Oklahoma County Society Report.....	247
Report of the Council.....	248
Proposition for Home Site.....	249
Bone-Graft, Application of the Principle of, to Unretainable Recent Fractures.....	337
Bone Work Under Local Anesthesia.....	198
Bones, Tumors of Long.....	100
Bladder Stone With Case Report.....	275
Brain Injuries, Remarks on Accidental.....	333
Canthoplasty, New Operation for, with Special Technic in Cases Due to Trachoma.....	93
Clinician and the Laboratory, The.....	472
Club Feet, Treatment of.....	278
Colonic Ulceration, Its Treatment.....	54
Cystocele, Rectocele and Procidentia Uteri, The Surgery of.....	353
Cystoscope in Diagnosis, The Simple.....	429
Diphtheria, Laryngeal.....	20
Ectopic Gestation, Diagnosis and Treatment of.....	435
Facts and Views About the Annual Meeting Place.....	165
Feeding of Normal Infants, Artificial.....	146
Femur, Treatment of Fractures of the.....	104
Focal Infections and Their Distal Consequences.....	362
Fractures of the Base of the Skull.....	335
Fumigation, The Fallacy of.—The Abuse of Tincture of Iodine.—Alcohol Not an Antidote to Phenol.....	194
Gas Infection.....	152
Goiter.....	290
Gonorrheal Ophthalmia.....	23
Hemorrhage From Ruptured Ovarian Cyst Simulating Ectopic Pregnancy: Case Report.....	369
Hysterectomy for Carcinoma of the Uterus with Galvano Cautery.....	285
Ileus, Adynamic: Report of Two Cases.....	373
Improvement of Race and National Vitality.....	149
Infant Feeding.....	143
Infections of Childhood.....	139
Injuries of the Head.....	328
Intestinal Obstruction, Acute.....	433
Intestinal Stasis.....	1
Intravenous Medication.....	315
Keratitis, Symposium on:	
Etiology and Pathology of Keratitis.....	41
Symptoms and Diagnosis of Keratitis.....	43
Treatment of Keratitis.....	46



Lobar Pneumonia, Some of the Complications and Sequelae of.....	56
Malaria, The Prevention of.....	321
Metastases.....	421
Mortality Around Fifty Years.....	90
Mucous Colitis.....	183
Muscle Training in Infantile Paralysis.....	431
National Defense and Medical Preparedness, A Study of.....	201
Personal and General News.....	34, 74, 123, 173, 209, 166, 302, 342, 377, 412, 445, 482
Pellagra—A Symposium.....	
The Prevalence of Pellagra in Oklahoma.....	131
Diagnosis and Symptomatology of Pellagra.....	134
Management and Treatment of Pellagra.....	136
Pelvic Surgery, Do's and Dont's of.....	281
Pneumothorax, Artificial, in the Treatment of Pulmonary Tuberculosis.....	455
Proceedings of St. Anthony's Clinical Society.....	27, 67, 154, 159, 199, 294, 437
Pyelitis, Acute.....	52
Rachiocentesis.....	10
Roster of Members of the Oklahoma State Medical Association.....	170
Serums and Vaccines, The Use and Abuse of.....	358
Sick Headache.....	367
Stone in Bladder: Case Report.....	293
Stricture of the Bowel.....	197
Syphilis, An Early Treatment of, With Remarks on Its Prevention and Cure.....	392
Syphilis, Application of the Clinical Laboratory to the Diagnosis and Treatment of.....	400
Syphilis, Hereditary.....	387
Syphilis, Ocular Manifestations of.....	388
Syphilis of the Nervous System.....	383
Syphilis, Treatment of Latent.....	397
Teratology, With Presentation of Specimen, A Study of.....	16
Testicle, Tumors of the.....	58
Testicles, Double Undescended: Report of a Case Operated and Results Eleven Months After.....	427
Throat, The Differential Diagnosis and Treatment of the Diseases of the, Characterized by a Formation of Pseudo-Membrane.....	114
Thrombophlebitis.....	191
The Nurse.....	186
Traumatic Neurosis, An Inquiry Into the Medico-Legal Status of.....	85
Tuberculosis, Early Recognition of Pulmonary, and Its Economic Value.....	467
Tuberculous, Pregnancy Among the.....	458
Tuberculosis Situation in Oklahoma, The.....	461
Typhoid, Perforation in.....	12
Ulcer of Anterior Walls of Stomach, Report of Large Perforating.....	66
Varicose Veins, Their Results and Treatment.....	3
Women as Insurance Risks.....	424

#### SHORT SUBJECTS.

Absorbable Metal Clips for Ligatures.....	386
Cancer of the Breast.....	368
Chorea.....	89
Clavicle, Fracture of the.....	289
Council on Pharmacy and Chemistry, The.....	51
Cystitis.....	457
Eczema and Dermatitis.....	185
Eczema.....	200
Furuncle.....	320
Fever in Infancy.....	103
Fractures of the Femur.....	138
Fractures.....	190
Grip.....	148
Herpes Zoster.....	332
Hemihypertrophy.....	370
Hemolytic Jaundice.....	26
Heart Disease.....	296

Infectious Disease .....	65
Intestinal Parasites .....	9
Intubation of the Larynx .....	391
Iodid Medication by the Mouth .....	29
Leukemia .....	334
Lung Rest .....	113
Malignant Disease of the Throat .....	460
Myocardial Involvement .....	361
Operations, Unnecessary .....	428
Paraffin for Burns .....	327
Pericardium .....	357
Pregnancy and Tabes .....	474
Prostatic Abscess .....	292
Public Health Factors .....	423
Pyorrhea .....	153
Pyorrhea Alveolaris .....	161
Salvarsan and Neosalvarsan .....	280
Scoliosis, The Treatment of .....	440
Syphilis, Intraspinal Injections in Nervous .....	466
Syphilitic Lesions .....	196
Therapeutic Research .....	107
Tonsillectomy, Voice Impairment in .....	426
Traumatic Shock .....	336

## EDITORIAL.

A State Hospital Proposed for the University .....	30
Crude Death Reports .....	117
Consistency .....	118
Do You Come Under This Head, Doctor? .....	229
Getting in the Limelight .....	68
Grading the Sanitary Conditions of Shops .....	375
How Troubles Occur Over Workmen's Compensation .....	441
Lest We Forget, 1898 .....	297
Mortality Among Doctors at the Front .....	374
No Medical Defense if Applicant Was Not in Good Standing .....	375
Our Annual Meeting, May 8-9-10 .....	68
Our Annual Conflict With Texas .....	68
Our Good Year of 1916-1917 .....	207
Our Schools as Disseminators of Disease .....	339
Our Medical War Situation .....	442
Oklahoma's Needs in Tuberculosis Prevention .....	475
Paregoric Comes Under Terms of the Harrison Act .....	116
Reporting Births and Deaths and Good Citizenship .....	69
Senator Owen Attempts to Increase Number and Rank of Army Medical Officers .....	376
The Osteopath Furnishes Amusement .....	116
The New Law Governing Examinations .....	163
The Legislative Record on 111 .....	164
The War Task Confronting Oklahoma Physicians .....	206
The New Vital Statistics Law .....	207
The Modern Treatment of Tetanus .....	207
The Oklahoma City Meeting .....	165
The Legislative Committee Report .....	165
The New York Meeting .....	298
The Passing War Hysteria; Rotarians Off on the Wrong Foot .....	300
The Osteopath Wants to Go .....	341
The Oklahoma Physician and the War .....	405
The State Association for the Prevention of Tuberculosis .....	477
The Oklahoma Sanatorium for the Treatment of Tuberculosis .....	478

The Medicine Park Meeting.....	250
The Question of Medical Officers.....	251
Use the X-ray.....	375
Vale Chiropratic.....	162
Volunteering for Special Work.....	341
Workmen's Compensation Law Upheld by Supreme Court.....	70
Will the Government Draft Physicians?.....	340
We Who Could Not Go.....	477

#### CURRENT MEDICAL LITERATURE.

A Study of the Menopause With Special Reference to Its Vasomotor Disturbances.....	34
Annals of Surgery; December, 1916.....	119
Annals of Surgery; September, 1916.....	120
Acute Osteomyelitis of the Spine.....	122
Acute Syphilitic Meningitis.....	171
Artificial Cell Proliferation With Horse Serum in the Treatment of Burns.....	209
Annals of Surgery; May.....	301
A Further Study in the Use of Iodine in Combating Peritonitis.....	376
Buttermilk Mixture for Infant Feeding.....	209
By Warstat (Dutsch. Ztschr. f. Chir. 1917).....	376
Bruck's Sero-Chemical Test for Syphilis.....	408
Cancer of the Breast.....	252
Continual Stomach Lavage and Continuous Hypodermoclysis in Peritonitis, Persistent Vomiting With Dehydration, and Dilated Stomach.....	121
Cholecystectomy.....	341
Cause and Treatment of Constipation in Infants and Young Children.....	444
Definitions and Diagnostic Standard in the Diagnosis of Pulmonary Tuberculosis in Adult.....	479
Epilepsy.....	122
Experience in Reconstruction Surgery of the Extremities.....	444
Further Observations on Shock at the Front.....	409
Furunculosis Treatment.....	121
Goitre.....	443
Hypertrophic Ileo-Caecal Tuberculosis.....	170
International Abstract of Surgery.....	120
International Abstract of Surgery: January, 1917.....	120
Juxta-Articular Bone Lesions of the Hip.....	444
More Radical Treatment of Duodenal and Gastric Ulcer.....	32
Notes on the Standardization and Administration of Antimenigococcic Serum.....	444
Primary Treatment of Wounds in Civil Practice.....	33
Pulmonary Fat Embolism—A Frequent Cause of Post-Operative Surgical Shock.....	342
Recurrence of Gall Stones.....	169
Susceptibility of Man to Foreign Proteins.....	32
Surgical Cautions.....	119
Symposium on the Relative Merits of Cholecystectomy and Cholecystostomy.....	169
Surgery, Gynecology and Obstetrics: June, 1917.....	302
The Pathologic Changes in the Sympathetic in Goitre.....	33
The Medical History and Last Illness of John B. Murphy.....	71
The Sensory Evidence of Nerve Regeneration.....	121
The Use of Electric Light and Hypochlorous Acid in the Treatment of Wounds.....	122
The Influence of Acidosis on Surgical Procedures.....	122
The Carrel Method of Wound Treatment.....	172
The Trend of Surgery in Empyema of Thorax.....	208
The Significance of the Pastulous Appendix.....	208
The Medical Record: June, 1917.....	301
Tuberculous Peritonitis.....	376
The War Tuberculosis Program for the Nation.....	410
Vaginal Delivery After Caesarean Section.....	171
Value of Genu-Pectoral Position for Bastedo's Sign in Chronic Appendicitis.....	208
When Is the Diagnosis of Tuberculosis Without Positive Sputum Justified?.....	480



## MISCELLANEOUS SECTION

Action of the State Committees of the Medical Section, Council of National Defense.....	483
A Lillipution Babe.....	76
A Laboratory Booklet.....	217
A Real "Rest" Vacation.....	255
Afloat and Ashore.....	256
Better Vital Statistics.....	305
Cabot, Chiropractic and Diagnosis.....	175
Chiropractic Treatment for "Crabs".....	484
Clinical Data on Dichloramine-T.....	484
Common Sense and Consumption.....	176
Council on Pharmacy and Chemistry.....	77, 126, 217, 256, 311, 347, 380, 414, 448, 485
Directions for Making Blood Smears for Malarial Examination and Differential Blood Counts.....	254, 346
Do Not Fear Infantile Paralysis.....	305
Diastes Enzyme and Fat Contents.....	414
Enthusiasm.....	77
Food Shortage: An Appeal to Physicians.....	304
Heroin Unnecessary.....	76
Health and Patriotism.....	448
Its a Fine Little Bluff.....	378
Measles Too Prevalent.....	346
Narcotic Law—Decision of Court.....	306
New and Non-Official Remedies.....	38, 78, 126, 217, 256, 312, 348, 380, 414, 449, 485
Prejudice Versus Health.....	37
Partial Vacuum Method.....	37
Pure Water for Small Towns.....	253
Prevention of Malaria.....	254
Palatable Whole Wheat.....	308
Preventing Baby Blindness.....	346
Propaganda for Reform.....	38, 78, 127, 178, 256, 312, 348, 380, 415, 449
Rural Sanitation.....	36
Scientists Discuss Cancer.....	76
State Board of Medical Examiners.....	126, 309, 379, 485
Splenectomy.....	346
Sanitation in the Trenches.....	347
The Wassermann Reaction.....	37
The Nurse Anesthetist Question.....	125
Treatment of Ivy Poisoning.....	176
The National Free Tubercular Sanatorium Association.....	176
The Cause of Pellagra?.....	178
The New Vital Statistics Law.....	212
The Army Medical Corps as a Career.....	216
The Wholesomeness of Gelatine.....	255
To Test Smaller Rations.....	380
To Avoid Colds.....	448
Typical "Negligent" Cases and Some Reasons for the Formation of the Indemnity Defense Fund.....	483
Whooping Cough and Measles.....	36
Woman in Suit Makes Fraud Claim.....	175
Wholesomeness and Economy.....	347
War Meeting for Health Officers.....	381
Work With Hoover and Serve Oat Food.....	414
Why The Allies Must Have Wheat Instead of Corn.....	448

## NEW BOOKS

Abnormalities of Myocardial Function.....	258
At the Bar of Public Opinion.....	258
Annals of Medical History.....	417
A Manual of Anatomy.....	486
Blood and Urine Chemistry.....	180
Botulism.....	418

Cataract: Senile, Traumatic and Congenital.....	381
Diseases of the Genito-Urinary Organs and the Kidneys.....	313
Diagnosis From Ocular Symptoms.....	418
Diseases of the Skin.....	451
Handbook on Gynecology.....	417
History of Medicine.....	452
International Clinics.....	80, 258
Impotency, Sterility and Artificial Impregnation.....	381
Medical War Manual No. 1.....	486
Musser-Kelly—Practical Treatment.....	486
Nostrums for Kidney Diseases and Diabetes.....	452
Practical Medical Series, 1916.....	79, 417
Principles of Treatment of Broken Limbs.....	180
Physical Exercises for Invalids and Convalescents.....	349
Roentgen Technic (Diagnostic).....	348
Societies.....	75, 144, 210, 345, 447
Suggestive Therapeutics.....	179
The Medical Clinics of Chicago.....	80, 180
The Surgical Clinics of Chicago.....	180, 417, 486
Text Book of Surgical Operations.....	257
Traumatic Surgery.....	258
The Mayo Clinic.....	350
Treatise on Regional Surgery.....	416
The Internal Secretions.....	416
The Treatment of Emergencies.....	417
The Prescription.....	451
The Roentgen Diagnosis of Diseases of the Alimentary Canal.....	451
The Treatment of War Wounds.....	452

## INDEX TO AUTHORS

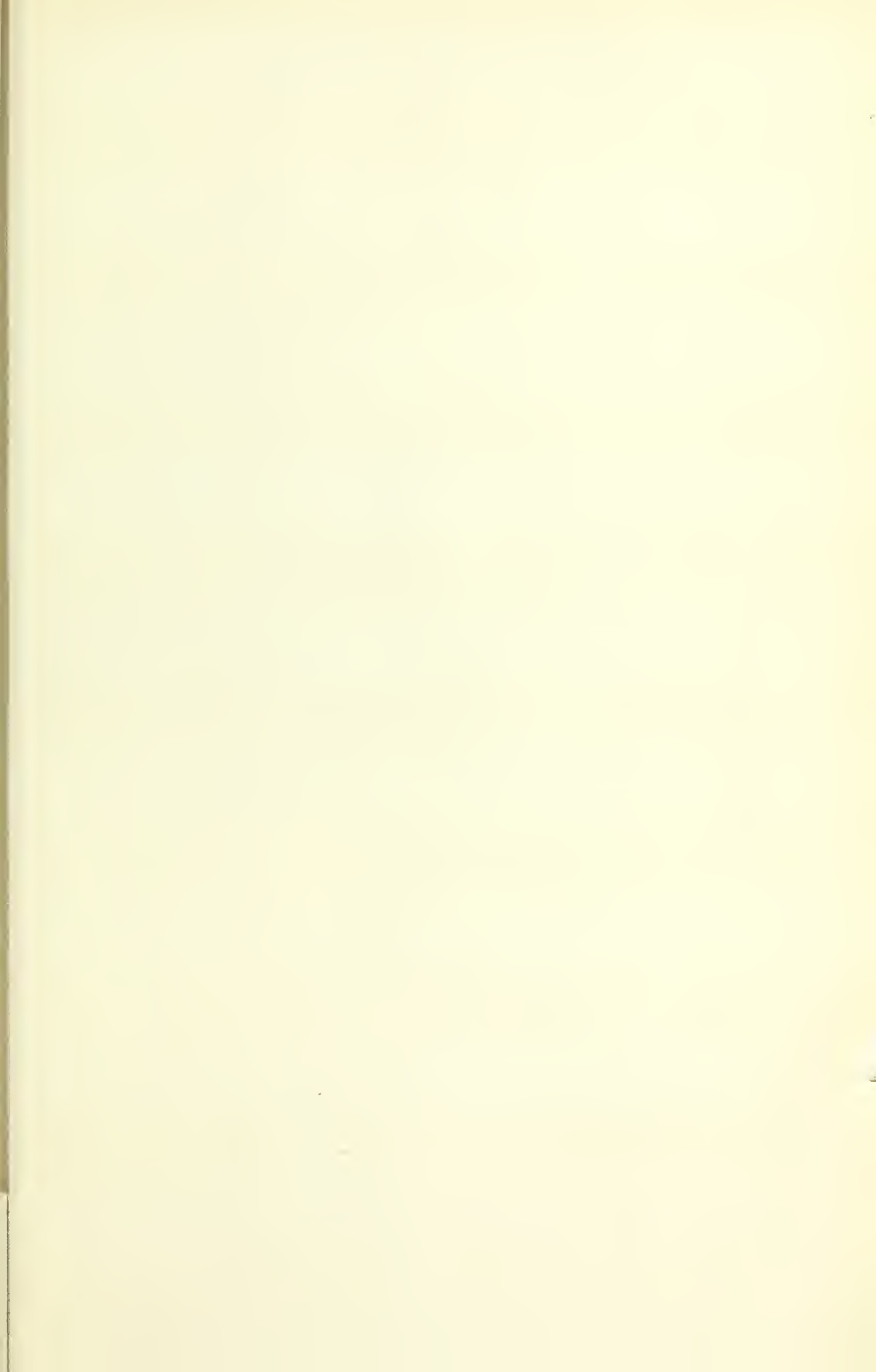
Bailey, W. H., Oklahoma City.....	58
Brooke, John A., Oklahoma City.....	100
Berry, V., Okmulgee.....	285
Blesh, A. L., Oklahoma City.....	353
Barnes, J. H., Enid.....	388
Cooper, J. M., Oklahoma City.....	25
Cotton, Lee W., Enid.....	228
Carson, F. L., Shawnee.....	433
Day, J. L., Norman.....	131
Day, Curtis R., Oklahoma City.....	227
Dutton, W. Forest, Tulsa.....	315, 467
Duke, John W., Guthrie.....	321
Edwards, R. T., Oklahoma City.....	392
Ferguson, E. S., Oklahoma City.....	43
Florence, J. H., Houston, Texas.....	90
Fisk, Chas. W., Kingfisher.....	358
Fowler, W. A., Oklahoma City.....	458
Griffin, D. W., Norman.....	383
Grosshart, Ross, Tulsa.....	281
Howard, P. M., Oklahoma City.....	3
Herod, Philip F., El Reno.....	41
Hartford, J. S., Oklahoma City.....	424
Holland, Dorothy J., Oklahoma City.....	431
Hume, Chas. R., Anadarko.....	134, 223
Heitzman, Chas. W., Muskogee.....	194, 367
Hull, Robt. L., Oklahoma City.....	278
Jackson, W. W., Vinita.....	198
Kilpatrick, Geo. A., McAlester.....	104
Kendall, W. L., Enid.....	387
Klass, O. C., Muskogee.....	186
Long, LeRoy, Oklahoma City.....	12
Livermore, W. H., Chickasha.....	66
Lamb, Ellis, Clinton.....	362

Landrum, S. H., Altus.....	421
McHenry, D. D., Oklahoma City.....	46
McCarley, T. H., McAlester.....	56
McNew, Manfred C., Ada.....	114
McLean, Geo. D., Oklahoma City.....	152
McClure, T. B., McCurtain.....	293
Mitchell, R. L., Vinita.....	23
Moorman, L. J., Oklahoma City.....	455
Neer, C. S., Vinita.....	369
Nesbitt, P. P., Muskogee.....	191, 397
Paulus, D. D., Oklahoma City.....	58
Phelps, Charles R., Oklahoma City.....	290
Ramsey, W. G., McCurtain.....	293
Riely, Lea, Oklahoma City.....	10
Riley, James T., El Reno.....	108
Riley, J. W., Oklahoma City.....	328
Robertson, Ira W., Henryetta.....	373
Read, H., Oklahoma City.....	429
Rice, C. V., Muskogee.....	146
Reichley, E. J., Helena.....	183
Roth, A. W., Tulsa.....	230
Stout, M. E., Oklahoma City.....	337
Sanger, Fenton M., Oklahoma City.....	427
Schevitz, Jules, Oklahoma City.....	461
Sanger, Winnie M., Oklahoma City.....	139, 371
Springer, M. B., Tulsa.....	143
Tisdal, V. C., Elk City.....	1
Taylor, W. M., Oklahoma City.....	52
von Wedel, C. Jr., Oklahoma City.....	7, 335
Wells, W. W., Oklahoma City.....	16
Williams, H. M., Wellston.....	20
Walker, O. J., Oklahoma City.....	27, 400
Wall, G. A., Tulsa.....	54
West, A. K., Oklahoma City.....	85
White, Daniel W., Tulsa.....	93
White, Peter Cope, Tulsa.....	93
White, J. Huthings, Muskogee.....	435
Watkins, J. C., Checotah.....	136
Warhurst, M. A., Sylvian.....	149
Will, A. A., Oklahoma City.....	197
Willour, L. S., McAlester.....	275
Young, Antonio D., Oklahoma City.....	333



## OFFICERS OF COUNTY SOCIETIES

County	President	Secretary
Adair	J. Patton, Stilwell	A. J. Sands, Watts
Alfalfa	S. B. Growden, Cherokee	L. T. Lancaster, Cherokee
Atoka		
Beaver		
Beckham	J. E. Yarrough, Erick	K. R. Rone, Elk City
Blaine	M. W. Buchanan, Watonga	J. A. Norris, Okeene
Bryan	J. H. Shuler, Durant	D. Armstrong, Mead
Caddo	W. T. Hawn, Binger	C. R. Hume, Anadarko
Canadian	P. F. Herod, ElReno	W. J. Muzzy, ElReno
Choctaw	V. L. McPherson, Boswell	E. R. Askew, Hugo
Carter	J. C. Best, Ardmore	R. H. Henry, Ardmore
Cleveland	J. M. Williams, Norman	Gayfree Ellison, Norman
Cherokee	W. B. Blake, Tahlequah	C. A. Peterson, Tahlequah
Custer	M. C. Comer, Clinton	S. C. Davis, Clinton
Comanche	L. A. Milne, Lawton	G. Pinnell, Lawton
Coal	J. B. Clark, Coalgate	A. Cates, Tupelo
Cotton	M. T. Clark, Walters	G. O. Wehh, Temple
Craig	C. S. Neer, Vinita	W. R. Marks, Vinita
Creek	C. D. Blachley, Drumright	H. S. Garland, Sapulpa
Dewey		
Ellis		
Garfield	W. L. Kendall, Enid	James H. Hays, Enid
Garvin	G. L. Johnson, Pauls Valley	N. H. Lindsey, Pauls Valley
Grady	E. L. Dawson, Chickasha	Martha Bledsoe, Chickasha
Grant		C. H. Lockwood, Medford
Greer	E. M. Poer, Mangum	T. J. Horsley, Mangum
Harmon		J. B. Hollis, Hollis
Haskell	M. VanMatre, Keota	J. R. Waltrip, Kinta
Hughes		
Jackson	D. C. Buck, Eldorado	W. H. Rutland, Altus
Jefferson	G. C. Wilton, Ryan	J. I. Derr, Waurika
Johnson	C. B. Ballard, Mannsville	H. B. Kniseley, Tishomingo
Kay		A. S. Risser, Blackwell
Kingfisher	C. E. Wagoner, Hennessey	Chas. W. Fisk, Kingfisher
Kiowa	Wm. McIlwain, Lonewolf	A. L. Wagoner, Hobart
Latimer		E. B. Hamilton, Wilburton
Le Flore	J. B. Beckett, Spiro	G. A. Morrison, Poteau
Lincoln		A. M. Marshall, Chandler
Logan	A. A. West, Guthrie	E. O. Barker, Guthrie
Love		
Mayes	J. E. Hollingsworth, Strang	W. C. Bryant, Choteau
Major		
Marshall	A. E. Ballard, Madill	O. E. Wellhorn, Kingston
McClain	J. W. West, Purcell	O. O. Dawson, Wayne
McCurtain	A. S. Graydon, Idabel	C. R. McDonald, Broken Bow
McIntosh	N. P. Lee, Checotah	Wm. A. Tolleson, Eufaula
Murray	J. A. Adams, Sulphur	W. H. Powell, Sulphur
Muskogee	I. B. Oldham, Muskogee	J. G. Nohle, Muskogee
Nohle		T. F. Renfrow, Billings
Nowata	J. E. Brookshire, Nowata	J. R. Collins, Nowata
Okfuskee	H. A. May, Okemah	J. M. Pemberton, Paden
Oklahoma	L. J. Moorman, Oklahoma City	F. B. Sorgatz, Oklahoma City
Okmulgee	N. N. Simpson, Henryetta	H. E. Breese, Henryetta
Ottawa	R. F. Von Cannon, Miami	G. P. McNaughton, Miami
Osage	J. M. Ennis, Pawhuska	Benj. Skinner, Pawhuska
Pawnee		E. T. Robinson, Pawnee
Payne	E. M. Harris, Cushing	J. B. Murphy, Stillwater
Pittsburg	J. O. Grubbs, McAlester	J. C. Johnston, McAlester
Pottawatomie	J. H. Scott, Shawnee	G. S. Baxter, Shawnee
Pontotoc	C. L. Orr, Ada	M. L. Lewis, Ada
Pnshmataha		
Rogers	W. E. Smith, Collinsville	W. A. Howard, Chelsea
Roger Mills	W. S. Wimberly, Hammon	Lee Dorrah, Hammon
Seminole		W. L. Knight, Wewoka
Sequoyah	S. B. Jones, Sallisaw	T. F. Wood, Sallisaw
Stephens	E. B. Thomason, Velma	J. M. Nieweg, Duncan
Texas	W. H. Langston, Guymon	R. B. Hays, Guymon
Tulsa	A. W. Roth, Tulsa	W. Forest Dutton, Tulsa
Tillman	A. J. Hays, Frederick	J. E. Arrington, Frederick
Wagoner	F. W. Smith, Wagoner	S. R. Bates, Wagoner
Wahita	D. W. Bennett, Sentinel	A. S. Neal, Cordell
Washington	W. E. Rammel, Bartlesville	J. G. Smith, Bartlesville
Woodward	Ralph Workman, Woodward	C. W. Tedrowe, Woodward
Woods	Isaac Hunt, Freedom	D. B. Ensor, Hopeton







During Infancy and Childhood it is important but difficult to keep the bowels in order. It can be done by the continued use of

## **Liquid Petrolatum Squibb**

### **Heavy (Californian)**

It is pure and safe, tasteless and odorless. Because it is neither a laxative, a cathartic, nor a purgative, but a perfect mechanical lubricant, is not absorbed by the system and does not disturb digestion, it may be given indefinitely in any necessary quantity. Thus it prevents intestinal toxæmia, restores normal action of the bowels, and aids in maintaining normal nutrition. Especially valuable for young patients during the summer and autumn months.

To be had at all drug stores in original one-pint packages under the Squibb label and guaranty.

---

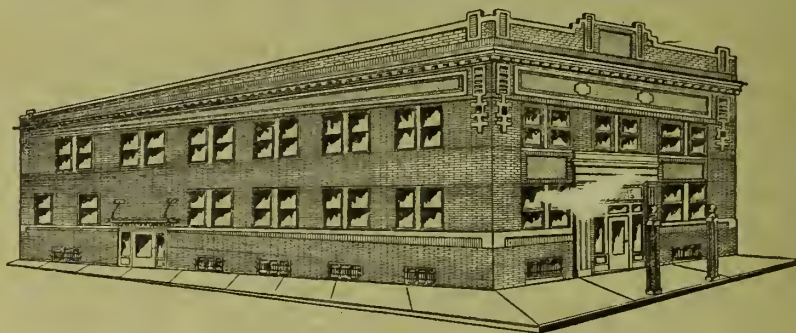
*LIQUID PETROLATUM SQUIBB, Heavy (Californian) is refined under our control and solely for us only by the Standard Oil Co. of California, which has no connection with any other Standard Oil Co.*

**E. R. SQUIBB & SONS, NEW YORK**

Manufacturing Chemists to the Medical Profession since 1858

LABORATORY OF  
**DR. WALTER E. WRIGHT**

TULSA, OKLAHOMA



CORNER THIRD STREET AND CHEYENNE AVENUE

Chemical, Serological, Pathological, Bacteriological and X-Ray

Milk Analysis, Water Analysis, Bacterial Vaccines, Anti-Rabic Vaccine

FEE TABLE, SPECIMEN CONTAINERS and INSTRUCTIONS on Application

Address **WALTER E. WRIGHT, M. D., Director**

TULSA, OKLAHOMA

# LOUISIANA POST GRADUATE SCHOOL OF MEDICINE

SESSION OF 1916-1917 OPENS OCTOBER, 1916

Courses are given throughout the year in

## Post Graduate Work

Unusual opportunities offered for clinical work, this School having abundance of clinical material at THE CHARITY HOSPITAL, THE ILLINOIS CENTRAL HOSPITAL, and THE ANTI-TUBERCULOSIS HOSPITAL.

Clinical diagnosis and treatment is emphasized by didactic and bedside instruction, with the advantage presented of pursuing any of the SPECIALTIES under completely organized clinics.

The LABORATORIES are fully equipped for the teaching of Tropical Medicine, Pathology, Vaccine Therapy, etc.

Exceptional opportunities for research work, together with courses in Bacteriology, covering examinations of the Blood, Pus, Sputum, Urine, and Gastric Juice. Special courses in the WASSERMANN REACTION, and the method of making AUTOGENOUS VACCINES.

For further detailed information, address

**DR. J. M. BATCHELOR, Dean**

1210 Maison Blanche

NEW ORLEANS, LA.

10-17







AUG 1959

WEST



